# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 614.—Vol. XVII. LONDON, SATURDAY, MAY 29, 1847. [Price 6d.


SHARES IN LEAD MINES, NEAR KETTLEWELL, LEYBURN, &c.

MR. JOHN HEPPER has received instructions from the executor of the late Mr. John Charlesworth TO SELL, BY AUCTION, at the GOLDEN LION HOTEL, LEEDS, on Tuesday, the 1st day of June, 1847, subject to such conditions as may be then and there produced—

TWO (14ths) SHARES in the VICTORIA MINE, near Kettlewell.
ONE (16th) SHARE in the GENTLEWOMAN MINE, near Kettlewell.
TWO (20ths) SHARES in the NORTH MOSDALE MINE, Coniston Moor.
FOUR (19ths) SHARES in the KELL HEAD MINE, Wensleydale, near Leyburn.

For further particulars apply to Mr. Charlesworth, Headingley, near Leeds; or to the auctioneer.—Sale to commence at Seven o'clock in the evening prompt. 1

VALUABLE MINE SETT AND MATERIALS TO BE SOLD, IN CONSEQUENCE OF SOME PECUNIARY DIFFICULTIES.

MR. MURRAY is instructed to OFFER, BY PUBLIC COMPETITION, on Tuesday, the 8th day of June, 1847, a valuable STEAM-ENGINE, of 50 inches cylinder, erected on the most approved principle, by Messrs. Hocking and Loam, 1845, since then and now drawing the water from the mine; together with the PUMPS, RODS, LADDERS, &c., necessary for carrying on the operation in the engine-shaft; and also, an excellent WATER-WHEEL, 50 feet in diameter, 2 feet 3 in. breast, with the pumps, rods, ladders, pulleys, stands, and other requisites, for further prosecuting the adventure in the eastern shaft, the same being now fixed, and in a proper position for proving the lode wrought on it, at a much greater depth.

Also, will BE SOLD, in the same lot, the remainder of the SETT for MINING, of 21 years, of which above 16 years are unexpired, of those extensive properties, situated in the parishes of St. Cleer and St. Ive, in the county of Cornwall, the same being known by the name of WHEAL GILL, being in the immediate vicinity of, and lying between, the valuable and productive mines of South and West Caradon and Wheal Trelawney, on a part of which sett one of the lodes has been wrought on to some extent.

The present shareholders have thought it advisable to offer the above for sale in the position in which it is now fixed, as the highest opinion of its future prospects is generally held.—The mine and materials now offered may be viewed on application at the mine, any day in the week preceding the day of sale, when every facility for examining the lodes and underground working will be given.

Refreshments will be provided at the counting-house at One o'clock in the afternoon, and the sale to commence precisely at Two.

Any further particulars may be obtained of Mr. Robert Taylor, the purser; or Mr. William Murray, auctioneer.

Dated Castle Villa Auction and Mining Offices, Liskeard, May 21, 1847. 2

TO BE SOLD, BY PRIVATE CONTRACT, at GODOLPHIN MINES, ONE 80-inch PUMPING-ENGINE, 10 feet stroke in cylinder and 9 feet in the shaft, with three tubular boilers, 34 tons, balance-bob, and first piece of rod.
ONE 35-inch PUMPING-ENGINE, 6 feet stroke, equal beam, boiler, 8 tons, balance-bob, and first piece of rod.
ONE 24-inch STAMPING-ENGINE, 8 feet stroke, boiler, 11 tons.
ONE 24-inch WHIM-ENGINE, 6 feet stroke, boiler, 4 tons, and cage.
ONE 18-inch WHIM-ENGINE, 4 feet stroke, boiler, 7 tons, and cage.
Application to be made to Capt. R. Williams, on the mines.
Dated Godolphin Mines, Helston, Cornwall, May 7, 1847. 3

SIXTY AND THIRTY-INCH CYLINDER STEAM-ENGINES FOR SALE.—TO BE SOLD, BY PRIVATE CONTRACT, a 60-inch cylinder STEAM-ENGINE, 9-ft. stroke, now at STRAY PARK MINE, in the parish of Camborne. Also, an excellent 30-in. cylinder STEAM-ENGINE, 10-ft. stroke in cylinder, and 9 ft. in the shaft, with a boiler, about 10 tons, spare pipes, &c., complete, at WHEAL KALE MINE, in the parish of Phillack. This engine is quite new, and was manufactured by the Messrs. Harvey, Hayle Foundry.

For particulars, and to treat for the same, apply to William Vawdrey, Esq., Penpol House, Hayle; or to Mr. Francis Fryer, Mine Broker, Auctioneer, and General Agent, Comford, Gwennap.—Dated Comford, May 12, 1847. 4

FOR SALE, a 70-inch cylinder ENGINE, without boilers.—For price, and further particulars, please apply to Samuel Grose, Esq., engineer, Wall, Gwinear, Camborne. 5

TO BE SOLD.—ONE HIGH-PRESSURE STEAM-ENGINE, of 40-horse power, calculated at 30 feet pressure to the inch. This engine is quite new, and very strongly built, having been intended for driving heavy machines, and is not now required.—For particulars apply to Mr. Matthew Smith, No. 19, Buttor-lane, Sheffield. 6

WANTED TO PURCHASE, A SECOND-HAND CRUSHER, in good condition, for a LEAD MINE; also, a WATER-WHEEL, of 20-feet diameter, and about 3 to 4 feet breast.—Particulars, price, &c., to be sent to Mr. T. Hacket, 26, Birchin-lane, London. 7

MULFRA-HILL AND BOSULVAL TIN MINE.—FOR SALE, BY PRIVATE CONTRACT, the ABOVE extensive MINE and MINE SETTS, with the WATER-ENGINE, and other MATERIALS necessary for working.—The mine adjoins the celebrated Tin Mine Ding-Dong, and, with a small outlay, may become very productive.

Application to be made to Mr. Henry Thomas, of No. 8, George-yard, Lombard-street, London; or to Capt. Isaac Penberthy, of the Providence Mines, St. Ives.
May 28, 1847. 8

CASTLE DINAS LEAD MINE, IN THE COUNTY OF CARDIGANSHIRE.

Divided into 3000 shares—limited to £10 each, and carried out on the Cost-book System, with a deposit of £3 10s. per share.

That a committee be appointed, to consist of not less than five, nor more than seven, adventurers, or shareholders; and that each member of such committee shall, at the time of his election, and during his continuance, hold, and continue to hold, not less than 25 shares in the said company; and that such committee be appointed by the shareholders, at a meeting to be held for that purpose, and for the nomination of all officers.

This mine is situated in the parish of Strata Florida, otherwise Caron M'Clowdd, near the Great Ystpytty, the Llwyn Mallas, Bryn, Berthlin, Cwmystwith, Llanfir, and several other of the richest mines in the county of Cardigan, extending under a surface of 117 acres.

The lodes of the different mines in the neighbourhood are supposed to run through the whole of this property.

The proprietor has, at his own expense, driven an adit level, upwards of 100 yards; and, so far as the lode has been developed, it is of the most flattering description, and holds out the prospect of an immediate return.

The lodes run east and west, varying from 1 to 6 feet wide—producing lead, mundic, zinc, copper, and manganese; the matrix is carbonate of lime, embedded in clay slate.

One of the great advantages of this mine is the natural facility it affords for working the mine, without the aid of steam-power—thus insuring to the company a saving of several hundreds per year: its proximity to an ever-endless stream of water, running through the entire property, available for, and capable of, working, washing, and crushing the ore, and all other necessary purposes, at a trifling expense.

This mine is situated within 16 miles of the port of Aberystwith, from which all the ore in the neighbourhood is shipped.

The royalty, or dues, will be 1-10th, according to the custom of the county.

Applications for shares, and further particulars, apply to Mr. B. Cook, mineral agent, Bradford-street, Birmingham. 9

TENDERS FOR WELSH COAL AND NORWAY TIMBER.—TENDERS may be FORWARDED to ME, on or before the 10th proximo, for SUPPLYING from TWO THOUSAND to THREE THOUSAND TONS, as I may require, of WELSH COAL, of the best quality, for STEAM-ENGINES, to be delivered over the ship's side, at Looe, on a wharf, or into barges, between Midsummer, 1847, and Mid-summer, 1848, in about equal quantities monthly, and so that the mines for which the coal is wanted shall be kept constantly supplied; in default of which, and also of the quality being the best, the extra cost (above the contract price) of obtaining a supply elsewhere, to be charged to the contractors. Payment to be made upon the quantity invoiced, unless the purchaser shall choose to have any cargoes weighed, and such cargoes shall prove deficient, in which case twice the quantity deficient shall be deducted from the quantity invoiced; the mode of payment to be by acceptance, at the end of two months, for the supplies of the previous two months. The tenders to state of what pit the coal is offered, and the invoices to certify that the coal is from such pit.

TENDERS may also be FORWARDED to ME, on or before the 10th proximo, for SUPPLYING the following mines—viz.: West Caradon, Gonamena, Craddock Moor, Tokenbury, Wheal Sisters, and Wheal Mary Consols, and also any small mines adjoining to, or within a mile of, any of the foregoing, for 12 months, from Midsummer next, with NORWAY TIMBER, half Dram and half Longsound, of good quality and average lengths, to be delivered at the respective mines free of expense, in such quantities as may be required, and when required, and to be charged at the measurement on which the duty has been paid. Any mine, or mines, may be tendered for separately.

Should the agents not approve of the quality of any timber sent in, the contractors to remove the same; and, at the option of the respective adventurers, either to replace it by an article of approved quality, or submit to a deduction from their bills of the amount of difference between the contract price and that at which the adventurers may obtain a supply from some other party; also, the amount of the like difference to be deducted from the contractors' bills in respect of timber purchased elsewhere, in consequence of the contractors not sending in supplies when and as required. Payment for timber by acceptance, at four months, from time of the bills being audited by the adventurers.

Liskeard, 14th of 5th month (May), 1847. EDWARD A. CROUCH. 10

PATENT GALVANISED IRON AND WIRE ROPE WORKS, *MILLWALL, POPLAR.*

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £20, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.—Mr. I. I. Trogellas, Truro, agent for Cornwall. 11

MINING ADVENTURERS' SUBSCRIPTION ROOM: ORIGINAL REGISTRY OFFICE FOR THE SALE AND PURCHASE OF MINING SHARES.

CROSSMAN, SOMMERS, AND CO., AGENTS,
28, *THREADNEEDLE-STREET LONDON.*

SHARES FOR DISPOSAL

| | |
|---|---|
| Birch Tor and Vitifer Tin Mine | Wheal Rose Consols |
| West Wheal Providence | Wheal Beam Tin Mine |
| Wheal Tremayne Copper Mine | Bedford United Mines |
| Great Wheal Frederick Tin Mine | Alfred Consols |
| Devon and Courtenay Consols | Dartmoor Consols |
| North Eastern Mining Co. of Ireland | Wheal Mary and Elizabeth |
| Exmoor Wheal Eliza | Coombe Mine |
| South Wheal Maria | Wheal Rose |
| Wheal Susan | Pennant Mining Company |
| Holmbush | Abergwessin Silver Mine |

Also, A FEW FORFEITED SHARES IN SOUTH FRIENDSHIP WHEAL ANN, by order of the purser. 12

ON SALE—COLLIERIES, near BISHOP AUCKLAND, in the county of DURHAM.—TO BE SOLD BY PRIVATE CONTRACT, the UNEXPIRED TERM, held by the present lessees, in the GORDON and EVENWOOD COLLIERIES. The above collieries are now in work, and are so situated as to command a considerable export, as well as land sale, trade. These advantages will be materially increased by the formation of the Auckland Branch of the York and Newcastle Railway, and the new railways leading to the south and west—for all of which Acts are obtained. By the first, great facilities will be obtained for shipments on the Tyne and Wear.

For further particulars apply to Mr. Brogden, Stockton-on-Tees. 13

WANTED, either to RENT or PURCHASE, a SMALL COLLIERY, where the coal is of good quality, with a steady demand, or a SHARE of a more extensive concern, where the management would be left to the advertiser.—Apply by letter (post-paid), stating terms and particulars, addressed to Samuel Potter, Post-office, Newport, Monmouthshire. 14

TO IRONMASTERS AND OTHERS.—TO BE LET, OR SOLD, the MINERVA IRON-WORKS, HORSLEY-FIELDS, WOLVERHAMPTON, comprising, besides an ENGINE, of 36-horse power, the following MACHINERY:

A forge hammer, about 3½ tons, a train of 12-in. forge rolls; a 10-inch merchant mill, and a 7-inch guide mill, with a pair of 12-inch planishing rolls for hoops; also two pairs of shears, and a roll-turning lathe and weighing machine; six puddling furnaces and two reheating furnaces, with upright furnace boiler-and gearing. The whole are in working condition.

The above property is most advantageously situated, in the midst of a dense population, having the advantage of canal accommodation, and abutting on one of the principal thoroughfares in Wolverhampton.

Apply at Dr. Mannix's Rooms, Market-place, Wolverhampton. 15

TO BE LET, the PARK-HILL MINES, DEAN FOREST, GLOUCESTERSHIRE—containing ONE MILLION TONS OF COAL, and ONE MILLION TONS of rich IRON ORE, which, being calcareous, smelts well with argillaceous ironstone, and may be delivered in large quantities to the Staffordshire, Shropshire, and Welsh iron-works, at a price far below the cost of local ironstones. The mines are drainable by level, and can be opened at a trifling expense; and, were blast-furnaces erected, their produce might be smelted on the spot into excellent iron.—Apply (post paid) to Henry H. Fryer, Esq., solicitor, Coleford, Gloucestershire. 16

NORTH WALES.—TO CAPITALISTS.—A VALUABLE SLATE QUARRY ON SALE.—TO BE DISPOSED OF, BY PRIVATE TREATY, all that valuable property, known by the name of the

GWANAS SLATE QUARRY,

situate in the parish of DOLGELLY, in the county of Merioneth, with the BUILDINGS, MACHINERY, TOOLS, and other IMPLEMENTS belonging thereto, comprising Two Buildings, capable of lodging 50 workmen; an Office, for use of manager; a Machine-house, with machine complete, for sawing flags; Powder Warehouse and a Smithy, with smiths' tools and other implements; also Waggons and Sledges; and a quantity of Iron, for the formation of railroads, &c.

The quarry is advantageously situated, within five miles of the flourishing town of Dolgelly, six miles of the equally flourishing town of Duiasmouthy, and seven of the quay of Penmenpool, from whence there is a water conveyance to the port of Barmouth—distant five miles. A railway, or tramroad, could be formed to the above-mentioned quay at a very moderate expense—the ground being quite favourable the whole distance; if one was made, it would greatly reduce the cost of carriage.

The land in the holding of the present proprietors, and of which a map, or ground plan, can be obtained on application (copied from the lease under which the land is held), extends in length 1100 yards, and in breadth ——, and consists of the ridge of a mountain, formed by the vein of slate, affording most peculiar advantages for the working of the quarry at a very moderate cost, as well as the extension of the works at pleasure—having on each side of the ridge a precipitous fall of 150 yards, for the discharge of waste and rubbish, and the flow of water out of the quarry, and which will always render the construction of expensive machinery unnecessary (which is, of course, a very desirable object), and, in consequence, greatly lessen the cost of working it. Levels, or drifts, can be driven from either side of the mountain to the vein, which is imbedded in it. There are at present three such levels; at the end of each is an open space, 20 yards square and 25 yards in height—from all of which excellent slate is procured: these levels and openings will be serviceable in progressively working the quarry for several years to come; they have cost the present proprietors a large sum of money. The lower part of the quarry, which is now cleared, and has just been brought into a condition fit for working, presents an appearance that promises to produce slate to a very large amount. A new opening may be formed contiguous to the present ones, and of the same extent, the vein extending several hundred yards east and west, and is equally accessible in every part. This vein produces the following kinds of slate—viz.: duchesses, countesses, ladies' doubles, and moss, also flags and sills for windows. As regards the quality, they are similar in colour and metal to that produced at Lord Palmerston's, and the other well-known and profitable, quarries of Festiniog, which slate is marketable in every part of the United Kingdom. The Gwanas stone also splits remarkably even and uniform, and is also free from white or blue spots, and shates; and the durability of it is superior to most, and inferior to none of that of Carnarvonshire—a remarkable instance of which is, that there are to be seen in the neighbourhood of the quarry, houses that were covered with this slate taken from the top of the strata 60 years ago, before the present openings were formed, and still looks comparatively well. The grain also is very fine, fitting it in an eminent degree for fancy, as well as all useful purposes; another great advantage of this quarry, which should not be passed over, is its proximity to a navigable river—the distance from a water conveyance being less than the average number of the other principal slate quarries in North Wales.

The property is held under a lease, dated 29th Sept., 1841, granted by Richard Richards, Esq., M.P. for the county, to a company of 40 shareholders (subject to the yearly rent of £20, in addition to 1-10th of the profits of the quarry, as royalty; this lease can be renewed, if required), who divided the quarry into 3000 shares, at a certain sum per share, of which £2 has been paid up—amounting to the sum of £6000—which sum having been expended in forming the present openings, levels, roads, buildings, and other requisites, a further call was made for the sum of £3000, which was not attended to by the greater number of the shareholders; whereupon, at a meeting of the directors, the following resolution was passed:—"That it being impossible to raise the required sum of £3000 amongst the remaining shareholders, it is resolved that the quarry be disposed of by private treaty, for the best price that can be got for the same."

It is the opinion of an experienced slate quarry proprietor, that the above-mentioned sum of £3000 (the chief difficulties having been removed) would work it to a very considerable profit; and it is entirely owing to the principal number of the shareholders having become defaulters, and the inability of the present holders to pay up this sum, that it is now offered for sale.

It is also the opinion of an able mining engineer, whose professional advice has been obtained, that one portion of the quarry—viz., to the depth of the main level already made across the vein—contains a mass of rock, which, by yielding one-fourth of the quantity of slates produced in duchesses and ladies, is worth many thousand pounds sterling; and that, if a part of the above-mentioned sum was expended in driving another level, and forming another opening, 20 yards below the present ones, sufficient space would be given for the working of 72 men, or 12 bargains.

The following is the method of working the principal slate quarries in this country—the workmen are formed into companies of six men, called bargains; each company or bargain procure slates to the value of £30 per week, over and above the amount of their wages (it is supposed this plan could be followed here), each bargain will thus produce about £1000 per annum clear profit, as the following calculation will show:—

| | | | |
|---|---|---|---|
| Produce of one bargain (or six men) | | | £33 0 0 |
| Wages and powder | £5 | 0 0 | |
| Carriage | 4 | 0 0 | |
| Royalty | 3 | 0 0 | 12 0 0 |
| Remains | | | £21 0 0 |

or £1092 per annum; supposing 12 bargains, or 72 men to be employed, a profit of £13,104 would be realised. The quarry at present is only worked by three men, the number required to keep possession, who make a return of 20 per cent. above the amount of their and an agent's wages. Considering the great disadvantages under which three men only must labour, and bearing in mind that the slate which they procure is what they obtain in forming the openings, the return is not small. This statement may appear to some to be exaggerated, but an inspection of the quarry will remove all doubts upon the subject. This is an opportunity for investment which very seldom offers; it is a well-known fact, that no property yields a greater return than a good slate quarry: there are some at present, in this country, that make an annual return of from £60,000 to £100,000, and have done so for some years. Had the Gwanas defaulters been prompt in paying up their shares, a handsome profit would undoubtedly have long since been realised. Further particulars may be had, and specimens of the slate seen on application to Messrs. Thorley and Robinson, 3, St. James's-square, Manchester; and Messrs. Faulkner and Co., 1, Bedford-row, London; and Edward Humphreys, Esq., Borthwen-terrace, Barmouth; and the quarry can be inspected on application to Ll. C. Lewis, Esq., mine agent, Barmouth, North Wales.—May 16, 1847.

The time allotted for the sale is to the 1st of July next, when (if not sold), it will be withdrawn from the market.

**Stannaries of Cornwall—In the Vice-Warden's Court.**

PURSUANT to a DECREE in the VICE-WARDEN'S COURT, made in the cause of "Hill *v.* Vigurs," the creditors in respect of the ROYAL POLBERROW MINES, otherwise the ST. AGNES CONSOLIDATED MINES, in the parish of St. Agnes, within the said Stannaries, are, on or before the 11th day of June next, to come in and PROVE THEIR DEBTS before the Registrar of the said Court, at his office in Truro; or, in default thereof, they will be EXCLUDED THE SAID DECREE.

Dated, Registrar's Office, Truro, the 20th day of May, 1847. 18

THE COAL AND IRON TRADE.—WANTED, by a person practically acquainted with blast-furnaces, and the working of coal and ironstone mines, a SITUATION, as SUPERINTENDENT or MANAGER. The advertiser is competent to keep books by double entry, and would not object to an engagement in any British Colony, or the United States of America. Satisfactory references can be given.—Application by letter, addressed "X. Y. Z.," to be left at No. 13, Hockley, Birmingham, will be forwarded to the advertiser, and receive immediate attention. 19

WANTED a RESIDENT MANAGER of IRON and COAL-WORKS, in an ANTHRACITE COAL DISTRICT, qualified in all respects for such a situation, and who can be well recommended. Applications, containing testimonials of ability, and salary required, to be sent—directed for the Pembrokeshire Iron and Coal Company, at Messrs. Tustin and Barlow's, 4, New Bridge-street, London, on or before 10th of June next. 20

WANTED IMMEDIATELY, IN NORTH WALES, a GENTLEMAN of experience, as PARTNER; he is required to be possessed of practical knowledge of SURVEYING, &c.—For further particulars apply to "A. B. C." care of the Editor of the *Mining Journal*, 26, Fleet-street, London. 21

WHEAL TRELAWNEY MINE, LISKEARD.—Captain PETER CLYMO, Jun., having RESIGNED his SITUATION, as Manager and Purser of the above mine, applications and testimonials for a person to fill the above offices, will be received by him until the 19th of June next, shortly after which the person selected will have due notice thereof. None need apply who are not thoroughly acquainted with the practical part of mining.

Dated, Trelawney Mine, Liskeard, May 19, 1847. 22

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 18, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS. 23

JONATHAN DAVEY, MINE AGENT, SURVEYOR, AND SHAREBROKER,
*MATTHEW-STREET, TAVISTOCK.*

Mines surveyed, inspected, and reported on, at the shortest notice; plans, sections, and dialling performed, by day or contract. 24

WILLIAM H. SMITH, MINING SHARE AGENT,
10, *WARNFORD-COURT, THROGMORTON-STREET,*
*MINING OFFICES, 1, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.* 25

WATSON AND CUELL, MINE AGENTS.—N.B.—STATISTICAL INFORMATION furnished (on application) to SHAREHOLDERS in MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain. 26

THOMAS P. THOMAS, MINE AGENT, AND DEALER IN RAILWAY AND OTHER SHARES,
18, *THREADNEEDLE-STREET, LONDON.* 27

MR. R. TREDINNICK, MINING AGENT AND DEALER IN EVERY DESCRIPTION OF SHARES.
*THREE KING'S COURT, LOMBARD-STREET, LONDON.* 28

MESSRS. WINSTANLY AND CO., SHAREBROKERS, inform their friends and the public, they BUY and SELL every description of RAILWAY SHARES on the most advantageous terms; they also make advances upon the deposit of scrip and shares for periods as may be agreed.
6, Bank Chambers, City. 29

JAMES LANE, MINING SHARE DEALER,
75, *OLD BROAD-STREET, LONDON.* 30

CURRENCY CREEK SPECIAL SURVEY, SOUTH AUSTRALIA, under a Land Grant by Government, 1840.—The undersigned, having received an important communication from their agent, Mr. Richard Winter Beddome, request the original SHAREHOLDERS and PROPRIETORS of LAND GRANTS, interested in the survey, to MEET at the London Tavern, Bishopsgate-street, on Monday, the 31st of May, at Two o'clock precisely, to determine on what steps are necessary to be taken, in consequence of the favourable intelligence they have received.

HANANEL DE CASTRO.
FREDERICK FRIEND.
B. C. T. GRAY.
London, May 24, 1847. J. R. THOMSON. 31

ANGLO-MEXICAN MINT OFFICE, 5, Broad-street-buildings, May 25.—Notice is hereby given, that the HALF-YEAR'S DIVIDEND, declared at the Annual General Meeting of shareholders, held on the 4th inst., will be PAYABLE on and after the 2d of June next.—Claims to be made, and certificates presented, three clear days previous to payment.

Printed forms of claim are to be obtained at the office.—Hours of attendance Eleven to Three. G. B. LONSDALE, Secretary. 32

MEXICAN AND SOUTH-AMERICAN COMPANY, 10, New Broad-street Mews, May 25, 1847.—The TWELFTH ANNUAL GENERAL MEETING of the proprietors of shares in the Mexican and South-American Company will be HELD at the office of the Anglo-Mexican Mint Company, 5, Broad-street-buildings, on Wednesday, the 9th day of June next, at One o'clock precisely. At this meeting a director will be elected, in the place of H. W. Schneider, Esq., who retires by rotation, but is eligible for re-election, and will be proposed accordingly.

H. W. SCHNEIDER, Managing Director. 33

NATIONAL BRAZILIAN MINING ASSOCIATION.—Notice is hereby given, that the LAST DAY for the PAYMENT of the SECOND INSTALMENT of £1 per share, on the marked shares of this association, is fixed for Tuesday, the 8th of June. By order.
26, Throgmorton-street, May 26, 1847. 34

OFFICE OF THE COLOMBIAN MINING ASSOCIATION, 13, Austinfriars, London, May 27, 1847.—The TWENTY-SECOND ANNUAL GENERAL MEETING of the proprietors of the COLOMBIAN MINING ASSOCIATION will be HELD at the office of the association, No. 13, Austinfriars, on Thursday, the 17th of June next, at Two o'clock precisely.

By order of the board of directors, L. R. JONES, Sec. 35

TINCROFT MINING COMPANY.—Notice is hereby given, that the ADJOURNED ANNUAL GENERAL MEETING will be HELD at this office on Wednesday, the 2d day of June next, at Two o'clock precisely.
44, Finsbury-square, London, May 19, 1847. 36

UNITED HILLS MINE COMPANY.—The directors hereby give Notice, that the ANNUAL GENERAL MEETING of the shareholders of this company will be HELD at their office on Thursday, the 10th day of June next, at One o'clock precisely, to receive the report of the directors and of the agents in Cornwall; and to elect one director, in the room of Mr. Tyas; and one auditor, in the room of Mr. Faith, who go out by rotation, but are re-eligible.

By order of the board, JAMES SMITH, Secretary.
5, Adam's-court, Broad-street, May 20, 1847. 37

WHEAL CURTIS COPPER MINING COMPANY.—Notice is hereby given, that, at a General Meeting of the shareholders, held on the 18th inst., pursuant to advertisement, the DEED OF SETTLEMENT was adopted, and a CALL of TEN SHILLINGS per share made, and that such call be PAID within 21 days from the 18th inst., to Messrs. Cunliffes and Co., bankers, 24, Lombard-street, London; and Notice is also given, that the said Deed of Settlement now lies for execution by the shareholders, at the offices of the company, Gresham Rooms, Basinghall-street, and will there remain until Saturday, the 12th of June next, between the hours of Eleven and Three. By order of the board,
Dated this 24th day of May, 1847. GEO. A. JACOB, Secretary. 38

WHEAL SOPHIA MINE, LEZANT, CORNWALL.—Notice is hereby given, that a SPECIAL MEETING of the shareholders of the above mine will be HELD at the Catherine Wheel Inn, Little St. James's-street, St. James's, London, on Monday, the 7th day of June next, at Three o'clock P.M., for the purpose of examining the lease, auditing the accounts, and other business.
Dated Upputon, Milton Abbot, May 28, 1847. D. WARD, Purser. 39

ASSAYING AND ANALYSIS.—MR. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,
23, *HAWLEY-ROAD, KENTISH TOWN, LONDON*
to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual. 40

# Transactions of Scientific Bodies.

*MEETINGS DURING THE ENSUING WEEK.*

| Society. | Address. | Day. | Hour. |
|---|---|---|---|
| Western Scientific Institut. | Leicester-square | Monday | 8½ P.M. |
| British Architects | 16, Grosvenor-street | Monday | 9 P.M. |
| Medical | Bolt-court, Fleet-street | Monday | 8 P.M. |
| Linnæan | Soho-square | Tuesday | 1 P.M. |
| Horticultural | 21, Regent-street | Tuesday | 3 P.M. |
| Civil Engineers | 25, Great George-street | Tuesday | 8 P.M. |
| Society of Arts | Adelphi | Wednesday | 8 P.M. |
| Zoological | 11, Hanover-square | Thursday | 3 P.M. |
| Royal | Somerset-house | Thursday | 4 P.M. |
| Antiquaries | Somerset-house | Thursday | 8 P.M. |
| Royal Institution | Albemarle-street | Friday | 8 P.M. |
| Royal Botanic | Inner Circle, Regent's-park | Friday | 3½ P.M. |
| Asiatic | 14, Grafton-street | Saturday | 3 P.M. |

# Proceedings of Public Companies.

*MEETINGS DURING THE ENSUING WEEK.*

MONDAY.....Deal Pier Company—London Tavern, at Two.
Hungerford Market Company—offices, at One.
Currency Creek Special Survey, South Australia—London Tavern, Two.
TUESDAY.....Grand Junction Canal Company—Crown and Anchor Tavern, at Eleven.
Madras Railway Company—offices, at Twelve.
WEDNESDAY...Gravesend and Rochester Railway—George and Vulture Tavern, at One.
Regent's Canal Company—office, at One.
Tincroft Mining Company—offices, at Two.
Guardian Assurance Company—offices, at Eleven for Twelve.
THURSDAY....Hammersmith Bridge Company—Crown and Anchor Tavern, One.
Surrey Iron Railway—Spread Eagle Inn, Wandsworth, Eleven.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

## PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY.

INCORPORATED BY ROYAL CHARTER, DATED DEC. 31, 1840.

Capital £1,000,000, in 20,000 shares, of £50 each,

*With authority from the Lords Commissioners of Her Majesty's Treasury to increase it to £1,500,000.*

The thirteenth half-yearly meeting of proprietors was held at the offices, St. Mary-Axe, yesterday (Friday),

Sir J. CAMPBELL in the chair.

After the usual preliminaries, the following report was read by Mr. HOWELL, the assistant secretary:—

THIRTEENTH REPORT—HALF-YEAR ENDING 31ST MARCH, 1847.

*Thirteenth Report of the Court of Directors to the Proprietors of the Peninsular and Oriental Steam Navigation Company:—*

The directors have the pleasure of meeting you, in order to report upon the state of the company's affairs, pursuant to the terms of the deed of settlement, and to declare a dividend for the half-year ending 31st March, 1847.

The reports which the board of directors have hitherto made to the proprietors, at the close of each half-year, have entered so fully into the operations of the company, that they have but little, on the present occasion, of a new character, to present to your notice.

They are again enabled to give you a satisfactory assurance of the profitable working of the establishment; and they feel persuaded that, the business of the company continuing as at present to the close of the year, they will be prepared at the annual meeting, to give a gratifying report of the result of the trade, and the condition and permanent character of the company's operations.

Since the last meeting of proprietors, the following vessels have been despatched by the directors to India and China—viz.:

| | | | |
|---|---|---|---|
| The *Haddington* | 1647 tons, | and 500 | horse-power. |
| „ *Pekin* | 1182 | „ 430 | „ |
| „ *Pottinger* | 1401 | „ 500 | „ |

This addition to the company's ships in the East will greatly improve the efficiency of the establishment, and give a more permanent character to its operations in that quarter. The directors intend to follow up these arrangements, by placing two additional vessels in the Indian Seas; and for this object, they have made contracts with Messrs. Pitcher, for two timber ships of 1205 tons each, and engines, by Messrs. Miller, Ravenhill, and Co., of 450-horse power each; Messrs. White, of Cowes, are also building for the company one vessel of 900 tons, to be fitted with engines of 350-horse power.

In addition to the foregoing, the following vessels are in course of completion, and will be added to the company's fleet this year—viz.:

| | | | |
|---|---|---|---|
| The *Indus*, | 1220 tons, | 500 H.P., | ready for sea June, 1847. |
| The *Trafalgar* | 1000 „ | 400 H.P., | ready for sea July, „ |
| The —— | 1040 „ | 400 H.P., | ready for sea Oct. „ |
| The —— | 1220 „ | 500 H.P., | ready for sea Dec. „ |

The directors in the last report stated, that they had had under their consideration the subject of the passage-money by the company's vessels between England and India, with a view to a reduction of the rates, which measure they had decided upon adopting. This reduction, equivalent to a diminution of 10 per cent. on the full fare between Southampton and India, has since been carried out with much satisfaction to the public; and, although it may at first cause some diminution in the amount of the company's receipts on that line, yet the directors feel confident, that ultimately, it will be found beneficial to the interests of the establishment.

The directors report, that since the last meeting of proprietors, they have carried out the intention therein alluded to, of having a branch of the London establishment appropriated to the special purpose of receiving parcels for India direct from the parties forwarding them, thus rendering any intermediate agency unnecessary. The plan has been in operation for some months, and has been found, not only beneficial to the public, but also advantageous to the company, by establishing an efficient check upon the mode in which the business has been conducted. It has come to the knowledge of the directors, that, in more than one case, in the course of this year, packages, containing specie, have been shipped with an incorrect description of the contents; the company have thus been deprived of their regular rates of freight for bullion, and even the owners of the property have been ignorant of such a system being adopted. The measures which the directors have taken to establish a branch department for this traffic, will, therefore, appear to have been called for on those grounds alone, without reference to the general accommodation and additional security which it has offered to the public at large. A favourable opportunity having offered for the sale of the company's steamer, the *Royal Tar*, on advantageous terms to the company, the directors availed of it, and that vessel's place will be supplied by a more efficient steam-ship, better adapted for the general purposes of the company. The directors continue to keep up the plan sanctioned by successive general meetings of proprietors, of insuring a certain proportion of the company's floating property—so that in the event of loss, the amount cannot, at any time, be seriously felt. The amount which has been, from time to time, reserved out of trading profits, to create an insurance fund, now leaves a balance to the credit of that account of 118,000*l.* In the case of the unfortunate wreck of the *Tiber*, on the 21st of February, in a fog, off Oporto bar, the ship was covered to the extent of 30,000*l.*, and the original cost was only 28,600*l.* Under these circumstances, the loss is to be regarded less in a pecuniary point of view, than as one which has deprived the company of the services of an efficient vessel. The directors, having been repeatedly urged by the merchants, and other influential persons interested in the intercourse with Australia, to establish a communication with the colonies in that quarter, by means of steam navigation, have given that subject their attentive consideration. They have collected a variety of detailed information relative to the traffic, in order to guide them as to the terms on which the company can undertake to establish such a communication under a mail contract, whenever her Majesty's Government may determine on its expediency.

Considering, also, that having the communication by steam navigation already established in that direction as far as Singapore, this company is in a position to carry out an extension of it to Australia, on more economical terms for the public than any other party, the directors have deemed it proper to place themselves in communication with the Lords Commissioners of her Majesty's Treasury, intimating the willingness of this company to tender for the service, whenever their lordships may determine on establishing it. This communication has met with their lordship's approval, and they have further given their official sanction to the increase of the company's capital to the extent of 500,000*l.*

The directors contemplate issuing shares to represent this additional capital in the course of the present year, calling it up by instalments as it may be required, and by allotting the new shares at par to the then existing shareholders, to give them the benefit of the premium. A special meeting of proprietors to sanction this measure will be called at the proper time. The directors are enabled to state, that the company's vessels continue to be kept in the highest state of working efficiency; and that the necessary appropriations out of the receipts of the company for this important object, as well as to provide a fund for supplying new hulls and machinery, in place of those worn out in the service, are kept steadily in view. The directors recommend that a dividend of 4 per cent. out of the profits for the six months ending 31st of March, 1847, be now declared, free of income tax, and that the same be payable on and after the 23d of June next.

The CHAIRMAN said, he was sure the proprietors assembled would feel that the report showed that the affairs of the company were in a healthy condition, and that they possessed resources equal, not only to the present, but to any future emergency. (Hear.) He did not think it necessary to go at large into the subject of that report, nor did he see any thing in it calling for any special detail. However, if there was any thing in the report which called for explanation, or if any proprietor wished to make any statement, or ask any questions, he would be happy to afford any information in his power.

After some conversation, the report was then unanimously agreed to, and adopted.

A PROPRIETOR wished to know whether the new shares, representing 500,000*l.*, would be issued at once, or proportionably to the wants of the company?—The CHAIRMAN thought that was a matter which would entirely depend on the wants of the company, and on any necessities that might arise. He believed at present the intention was, that only a portion should be issued, and that the remainder should be kept in reserve to meet any necessities that might arise. The official letter from the Treasury had been received within a period so short, that the directors had not had time to take it into full consideration. (Hear.)

After some conversation, a PROPRIETOR suggested, whether it would not be better to issue all the new shares at once, and to call in the instalments as they might be required.

The CHAIRMAN said, that the official letter from the Treasury had been so very recently received, that the directors had not had full time to consider it, but that the best consideration would be given to the subject; and it was probable that if, on due consideration, it should be felt advisable, all the shares might be issued at once.

A PROPRIETOR suggested that, as the charter of the company provided for the creation of 15 directors, and, considering the constantly increasing extent of their business with India and China, it would only show a fair consideration for those great communities to fill the vacancies in the direction with gentlemen connected with the presidencies in India, and also with gentlemen connected with China.

The CHAIRMAN said, that it was a fact, which the meeting would, probably, hear with surprise, that though the Indian and Chinese communities might be supposed to take a great interest in the extension of steam communication to that part of the world; and though, undoubtedly, a great part of the company's profits arose from their connection with India and China, notwithstanding they had never yet received as much capital from China and India put together as would pay the expenses of constructing a single vessel, whilst three-fourths of their capital had been furnished from England.

Mr. BENSON thought a more detailed statement of their affairs should be published; but his suggestion was overruled—the CHAIRMAN observing, that all the books and accounts were open to the inspection of the proprietors; and Mr. MELVILLE saying, that the time would soon arrive, when a more detailed and explicit statement of the affairs of the company would be desirable: but, until they had completed all their plans, and carried into effect all their operations, it would not be advisable to give every one who chose it the opportunity of investigating the affairs of the company.

A PROPRIETOR stated, it had been communicated to him, that if the mode of transit through the Desert were made more easy, if the carriages were improved, and the driving more careful, it would induce a greater number of females to come by the overland mail.

This gave rise to some conversation, the result of which may be summed in what the chairman stated at interlocutory intervals—namely, that upwards of five years ago the company had constructed carriages, which gave great satisfaction, and were a great improvement. The matter was now entirely in the hands of the Egyptian Government, and he had no doubt, that any fair representation on their part, made in that quarter, would be attended to. He feared that the complaint, as to the driving, could not be so easily remedied. The drivers and horses were Arabs, and many of the horses put to the carriages were put in harness for the first time, especially if the number of passengers to be conveyed was more than had been expected.

Capt. THORNTON, R.N.—With such drivers and horses, Sir Willoughby Cotton crossed the Desert in nine hours; they went all the time at full gallop. (A laugh.)

The CHAIRMAN said, the conveyance of passengers through Egypt and the Desert having passed into the hands of the Egyptian Government, he might state, that the most favourite vessel in the possession of the Egyptian Government was the *Delta*, which formerly belonged to the company, and they had just received instructions to get another exactly similar vessel built for the purpose.

Mr. RICHARDSON complained of the great increase in the charges for freight demanded by the company, which had been raised from 20*l.* to 40*l.* a ton—making a difference of 100*l.* per cent. Heretofore, parties had been in the habit of collecting parcels, for which they received a high freight, and which, having packed in one large mass, they forwarded by the company's conveyance, at the usual rate of 20*l.* a ton. These parties gained a great profit, whilst the company suffered in this way to a great extent, and some frauds had been committed, which had induced the company to take the matter into their own hands. He did not see, however, that that circumstance justified such a rise in the charge for freight as had taken place. He also objected to the distinction made in the freight for goods and merchandise—the former being considered to be that which was sent out to order, and the latter that which was sent out on speculation, and he saw nothing to justify such a distinction. He also objected that Capt. Barber, who had been an agent for the transmission of parcels on his own account, should, since the company had taken the matter into their own hands, have been placed at the head of that department. It was placing the sinner in the situation of the saint.—The CHAIRMAN.—He was placed there because he knew more about the matter than anybody else. (A laugh.)

Capt. BARBER denied that the present change was too great, being, as it was, lower than any other company—for they only charged 1*l.* for the conveyance of 1 cubic foot, weighing 20 lbs., while 30*s.* was charged by other companies; he entered into a detailed and most satisfactory explanation, showing that whilst engaged in the transmission of parcels to India, he had derived from that source an income of from 1200*l.* to 1400*l.* a year, and that on becoming the agent of the company, he had given up that source of emolument.—The explanation was very well received.

The CHAIRMAN said that, under the old system, a fact had come to light that an agent had transmitted by the company's means 1000 sovereigns in specie to India, for the transmission of which he charged 2½ per cent., making 25*l.*; whilst he paid the company only a few shillings—the specie having, without the knowledge of the company, been packed in one of 11 cases, the declared value of all of which 11 cases was only 83*l.* Now this was not only a fraud upon the company, but also upon the Egyptian Government; and, as a declaration of value was incidental to the collection of the transit duties through Egypt, any suspicion of fraud created in the mind of the Egyptian Government by transactions of that kind could not be easily eradicated, it might lead to great inconvenience.—A strong feeling of the fraudulent nature of the transaction was manifested.

Mr. RICHARDSON said that he had been the means of leading accidentally to the detection of the fraud referred to.

After some conversation on the subject, the CHAIRMAN said the matter complained of by Mr. Richardson was worthy of attention, and his representations should receive adequate consideration.—A vote of thanks to the chairman having been passed and acknowledged, the meeting adjourned.

WATERFORD, WEXFORD, WICKLOW, AND DUBLIN RAILWAY.—A special general meeting of proprietors was held yesterday, at the company's office, West Strand, for the purpose of taking into consideration the draft of a bill to authorise certain alterations of the line, and to amend the Act relating thereto—Mr. BARLOW in the chair.—The CHAIRMAN stated, that the meeting was purely formal, convened under Lord Wharncliffe's Act, to agree to the bill mentioned in the advertisement.—Mr. PERRY and Mr. DIXON, two Irish proprietors, raised a lengthened discussion as to the validity of the meeting, the same bill having been submitted to a former meeting, when it was not voted for by the majority required by the Standing Orders of the House of Lords. The two honourable gentlemen handed in a protest against going to another vote on the bill.—The heads of the bill were then read, and the CHAIRMAN moved that it be approved of.—Mr. PERRY moved an amendment to the effect, that as the subject had been disposed of at a former meeting, it was illegal to proceed with the bill.—The CHAIRMAN declined to entertain the amendment.—Mr. DIXON said, that he would move an amendment; it was to the effect, that, as the affairs of the company were so depressed, it was impolitic to proceed with the bill.—The CHAIRMAN declined also to entertain this one.—Mr. DIXON would simply move then, that the bill be not approved of.—On a division, there appeared 4 for the amendment, and 13 against it.—The original motion was then put, and declared to be carried.

EAST LINCOLNSHIRE RAILWAY.—A special meeting was held at the office, Great George-street, Westminster, on Thursday, to take into consideration, in pursuance of Lord Wharncliffe's Standing Order, the bills now being promoted before Parliament by the Corporation.—Mr. PACKE in the chair.—The advertisement having been read, the drafts of the bills were laid before the proprietors. The first bill was for making a deviation near Boston, and joining the line with the Sheffield and Great Grimsby Railway; the second, for taking the remainder of the lease of the Louth Navigation; and the third, for leasing the East Lincolnshire Railway to the Great Northern Company.—These bills were unanimously sanctioned.—The CHAIRMAN said, that he had, at the last meeting of the company, brought before the proprietors a measure for making a line from Louth to Lincoln, as a defensive project; but the directors, he begged to say, had withdrawn it, they having come to a satisfactory arrangement with the Sheffield and Manchester Company.—Thanks were then given to the chairman, and the meeting broke up.

LYONS AND AVIGNON RAILWAY.—A meeting of shareholders was held at the London Tavern, on Thursday, to consider the present position of the company.—G. R. PAUL, Esq., in the chair.—Mr. J. WILKINSON (the solicitor to the parties convening the meeting), entered into a long statement to show that under the present terms of the French Government it would be impossible to carry out the line, and after some discussion the following resolutions were carried:—"That, in the opinion of the meeting, unless more favourable terms of modification than had been hitherto suggested by the French Government could be obtained, it was expedient that the undertaking be abandoned, and the affairs of the company wound up without further delay." "That the only modifications which, in the judgment of the meeting, would enable the company to struggle successfully against the unfavourable state and aspect of the times were—1st. A very considerable extension of the lease; 2d. Exoneration from the Grenoble branch; 3d. A guarantee by the French Government of a minimum interest of 4*l.* per cent. per annum upon the paid-up capital, divisible among the shareholders, to commence from the homologation of the company, and to continue until the termination of the lease extended in accordance with the foregoing clause." It was next resolved—"That, in the opinion of the meeting, the companies who tendered for the concession having been misled by erroneous estimates, would have a strong claim upon the French Government for a return of the caution-money in full, if the above or equivalent modifications should not be granted." A committee having been appointed to carry out the above resolutions, a vote of thanks was given to the chairman, and the meeting broke up.

THE ATMOSPHERIC SYSTEM ON THE SOUTH DEVON.—At a meeting of the South Devon Railway Company, held on Saturday, at Plymouth, after approval had been given to the various bills now before Parliament, the CHAIRMAN entered into explanations with reference to the working of the atmospheric, and which, owing to its recent abandonment on the Croydon line, will have more than usual interest. He said, in reply to inquiries, that the line had been repeatedly worked from Exeter to Dawlish in every possible way, both by heavy weights and light weights, and all the experiments have been eminently successful with respect to both. We have obtained a speed of 70 miles an hour with light weights; and carrying 90 to 100 tons, we have obtained a speed of from 30 to 35 miles an hour—so that we have no doubt in our own minds of the success of the atmospheric. (Cheers.) We do not wish to open it for a less distance than 15 miles—it can be but a very short time before we shall use the atmospheric, and the atmospheric only, as far as Teignmouth. (Cheers.) We are making the utmost efforts to complete the engines between Teignmouth and Newton, and in three months we hope to get those engines ready.—General LEWIS said, after the sinister reports that had been spread, with regard to the atmospheric principle, it must be pleasing to hear these statements.—The CHAIRMAN: the reports have never affected us—the rumours have arisen out of misrepresentation. With reference to the Croydon, it has been stated by those who were not in the secret, that the reason why that was abandoned, was the failure of the system, whereas the system had nothing to do with it—it was a matter of expediency. It was determined to abandon it because it was inexpedient to have two systems of traction working within so short a distance o each other, and because one was often an obstacle to the other; and that eminent engineer, Mr. Cubitt, was only induced to assent to it on that account—the public are now quite aware of that.—Mr. NETTLETON asked when the line would be open to Totness?—The CHAIRMAN said they were only waiting for the completion of the deep cutting at Ford to open—another fortnight would complete it. The directors had resolved on opening to Plymouth immediately, and measures are taking for the purpose of running locomotives to Plymouth. (Cheers.) It is intended to run the atmospheric to Totness, and to run the locomotive the remainder of the way—from present appearance they might get to Plymouth before Christmas. (Loud cheers.) The Post-office had decided upon giving them a sorting post-office on the railway to Exeter, by which they should save an hour; and there was no doubt that they would put the post-office on to Totness, as soon as the line reached there, which would save two hours. (Cheers.)—Mr. W. FOX asked if the atmospheric was working from Dawlish to Exeter, as well as from Exeter to Dawlish?—The CHAIRMAN replied that it was working both ways.—It was intimated that the directors intend to make a call shortly of 5*l.* on the half shares.

## ON RAILWAY CARRIAGE BREAKS.

We last week gave a long account of the interesting proceedings of the Institution of Mechanical Engineers, but were compelled to postpone the following paper on the improvement in railway carriage breaks, read by Mr. Crawford, C.E., of Birmingham:—

The railway carriage break in common use is open to several objections, but principally on account of its being very ineffective in all cases of emergency, as when a train gets off the rails, or an axle breaks, or some obstruction is in the way, with the train going at great speed, and but a short space to stop in; under which circumstances it is desirable that a great amount of retarding force should be applied, and as promptly as possible. Another great objection arises from the break entirely checking the revolution of the wheel, and causing the periphery to wear in flat places, particularly on lines of railway having steep gradients, and which may not unreasonably be suggested as one of the causes by which a train occasionally gets off the rail; and for which no very satisfactory reason is often assigned. To overcome these objections, I propose a mechanical arrangement for accumulating power, equal to a number of men, in proportion to the carriages on which breaks are to be applied, and with a means of connecting the breaks of the several carriages together, and of distributing the retarding force or friction on each, in proportion to its weight, and by which means the breaks may be as suddenly or gradually applied as circumstances may require their intervention. To effect which I submit two plans—either a cylinder with a piston, acted upon by compressed air, or the ordinary atmospheric pressure against a vacuum or a series of springs placed in a frame, in connection with the machinery for communicating motion to the breaks, giving a decided preference to the latter arrangement, as the cheapest and least liable to get out of order. The connection may also be formed in two ways, either by a revolving rod running under the carriages, and fitted with a universal joint, and a socket at one end for the end of the rod on the adjoining carriage to fit into; or by means of fixed pulleys and chains placed under the floor of the carriage; but with either plan it is necessary that a spring should be attached to the lever of each break to regulate the amount of pressure to be applied, and to remedy any difference that may exist in the length of the connecting rods and friction blocks, or in any little irregularity that may take place in forming the connection between the carriages; and if the spring be properly constructed, it is obvious that, however great may be the motive power by which the breaks are applied, no more than the requisite amount of pressure can possibly be thrown on the breaks of any particular carriage, but without the spring, unless the construction of all the parts and arrangements in connecting the several carriages together are exactly equal in every respect (a circumstance by no means practicable), the whole amount of pressure would probably be thrown upon one carriage, and not without great danger of fracturing some of its parts. In the adoption of any plan for suddenly applying a great amount of friction to stop the momentum of a train (as in the arrangement now open for discussion), the application of which is only required at occasional and uncertain intervals, it is desirable that it should be constantly used to ensure its acting when fully required. I, therefore, propose to join the breaks of several carriages together, by either of the arrangements mentioned, and by placing the whole under the control of one guard. He would be able to use the breaks for the ordinary stopping of the train by allowing the springs to recoil about half the length of the frame in which they are placed, or, should it be necessary, it would be in his power to throw on the whole effective force of the breaks by a simple motion of his hand. In the arrangement proposed no alteration is made in the general plan of forcing the friction blocks against the wheels, by means of levers and rods attached to a horizontal bar placed underneath, and at right angles to the length of the carriage; and, therefore, no considerable expense would be incurred in carrying out the arrangement—the addition of a spring attached to the break lever with a series of springs for accumulating power being all that would be required to perfect the arrangement. Should the springs accidentally become disarranged the breaks may be applied by the hand, and those of each carriage may be separately used as the common break, whenever disconnected from the adjoining carriages. With regard to the construction of the springs, these made of a spiral form would be the best, if placed in a frame in which they could be regulated, by means of a nut and screw, to any desirable strength. As a proof of the durability of the spiral spring, I may mention that Mr. Salter, of West Bromwich, has one that has been under compression for upwards of seven years without having lost any perceptible amount of power, although loaded with a sufficient weight to force the coils of wire perfectly close. In proof of the inefficiency of the present breaks, when most required, Mr. C. then proceeds to instance several accidents which had occurred, in which the want of an improved plan was obvious.

Mr. CRAWFORD then explained, by the help of models, the action of his break, which is intended to be worked either by a cylinder or piston, or by a succession of springs, connected with the ordinary break.—The CHAIRMAN said, that it was perfectly practicable to attach breaks to all the carriages in a train by the ordinary plan, and to connect them by chains and rods. Supposing the plan of Mr. Crawford and Mr. Cheshire's buffer were in use together, it would then require uniformity in the carriages. At present, on the narrow gauge, they had carriages belonging to different companies in one train, and no two companies' carriages were exactly alike.—Mr. CRAWFORD saw no difficulty in that, so long as the pulleys were put on the same side of the carriages.—The CHAIRMAN thought that it would require—first, all the companies to agree in adopting this invention; and, secondly, their departing from their present course of constructing their carriages, which would be a considerable expense.—Mr. CRAWFORD said, it would not be necessary to have every carriage provided with a break; five or six would be enough in a train.

The CHAIRMAN remarked, that there were generally two carriages with breaks to each train at present.—Mr. CRAWFORD considered that the expense would not be more than 4*l.* or 5*l.* above the ordinary break. It could be applied without the slightest cutting up of the carriages.—Mr. FOTHERGILL said, that a steam break had been invented some years ago, which had not been carried out in consequence of the expense.—The CHAIRMAN thought that the result to be obtained would scarcely warrant the additional expense.

Mr. COWPER remarked, that the object of Mr. Crawford was to prevent accidents. The power of pulling up short was a gain, but he thought it might be effected by having an ordinary break to every carriage.—Mr. HENDERSON did not think the invention could be applied for the sum named, but thought that if it were in itself desirable the expense was not an objection. He questioned whether the stopping the wheels would stop the train.

The CHAIRMAN considered, that a complicated machine like that, any part of which being out of order would stop the whole, was less to be depended on than a simple contrivance of less power.—Mr. WARD considered, that a greaser part of stopping the wheels would be an advantage, and that it was desirable that one man should have the power of effecting this.—Mr. CRAWFORD explained, that he did not believe the stopping of all the wheels in a train would stop the train in less than 20 or 30 yards distance. It would probably be sufficient for the purpose to check two-thirds of the wheels. In case of the machinery breaking (which he thought might be rendered almost impossible), the ordinary breaks on the carriages might be used.—The SECRETARY, providing you had a man in each carriage to do it.—After some further conversation, the CHAIRMAN expressed his conviction that they could not pronounce an opinion on the invention, and that probably Mr. Crawford would be satisfied with the examination it had undergone.—That gentleman assented, and the meeting then broke up.

## THE ELECTRIC TELEGRAPH.

VICE-CHANCELLOR'S COURT—(Before Sir L. SHADWELL)—Saturday, May 22.

ALFRED BRETT AND GEORGE LITTLE *v.* THE ELECTRIC TELEGRAPH COMPANY AND CHARLES MASSI.—The plaintiffs, in this case, it appears, profess to have a new arrangement of telegraph, which is to surpass all others in value and usefulness. On behalf of the plaintiffs, Mr. Stuart, Mr. Webster, and Mr. Prior, appeared, and contended that, amongst the many improvements their clients had effected in electric telegraphs, was an apparatus which they denominate an hydraulic battery—a drawing and description of which, together with drawings and description of their other improvements, they deposited with her Majesty's Attorney-General, on the 8th of January, and obtained the Royal Letter Patent on the 11th of February last. The advantage of this battery is, that it is so constructed as to maintain a constant and equal power, by having a reservoir placed over the trough or battery containing the plates, which reservoir is to be supplied with the exciting liquid; and from which, by means of small cones or perforations at the bottom, a constant supply of fresh acid is continually dropping into the cells of the battery beneath—which battery being similarly furnished with small cones or perforations at the bottom, a continued percolation takes place, and the vitiated fluid escapes below.

Mr. STUART entered very fully into the case, with a view of convincing the court of the disadvantage the present arrangement of telegraphic communication suffers, in consequence of the formation of a salt, known to chemists as sulphate of zinc, which adheres to the plates, and thereby prevents the action of the acid upon the metal, as it accumulates until the battery becomes nearly powerless, and the working of the telegraph is very uncertain in consequence. The advantage of Messrs. Brett and Little's invention, as far as the battery is concerned, being obvious, the object of the present application was, that the court would grant an injunction, to prevent the Electric Telegraph Company, and C. Massi, from making, selling, using, or adopting, a certain battery, the same being identical in principle with the hydraulic battery of the plaintiffs. From the affidavits, it appeared that on the 25th of January, the defendant, C. Massi, constructed a certain battery, which he took to the Telegraph Company; and, upon their paying him 5*l.*, and entering into an agreement not to divulge the principle to any one in case of their not electing to adopt it, he left it for 30 days for their answer: and, in the meanwhile, with a view of securing it to himself, registered it according to the 5th and 6th Vic., cap. 67, as a percolating galvame trough. On the 16th of February, being five days after the plaintiffs had obtained the Great Seal to their Letters Patent, the Electric Telegraph Company, having made the required trial, and finding the advantages it possessed over their present imperfect mode, entered into an agreement by which they consented to allow the defendant, C. Massi, an annuity for 10 years for its use.

The plaintiffs, on the 1st of March, perceiving amongst the list of registrations in the *Mechanics' Magazine* and the *Patent Journal*, this percolating trough, proceeded to inspect the design, and, finding the principle identical with their own, the suit was commenced.—Mr. BETHELL and Mr. HEATHFIELD appeared for the Electric Telegraph Company; but, being prepared to abide the decision against C. Massi, did not enter into the merits of the case.

Mr. ROLT, with Mr. METCALF, appeared on behalf of C. Massi, and contended that this was evidently a case where the same idea had suggested itself simultaneously to two parties, there being no imputation upon their client, who, though poor, was an honest man.—(Mr. STUART said—Certainly not.)—The registration, they knew, was over-ridden by the patent of the plaintiffs; but he thought that they were in a position to prove a public use, by their client having sold one of the batteries to the Electric Telegraph Company in Jan.

His HONOUR, the VICE-CHANCELLOR, in giving judgment, said, the case appeared to be perfectly clear to him with respect to the public use—the Electric Telegraph Company having agreed not to divulge the secret, it could not be construed into a public use. It appeared quite clear, *the plaintiffs were entitled to the privilege of first inventors.* It was almost a similar case to the great astronomers discovering a new comet at the same time—the only difference being, that this was a simultaneous discovery in electricity. He should grant the injunction, as prayed.

REVENUE OF THE LONDON AND NORTH-WESTERN RAILWAY.—The account up to the 1st of May, shows a difference to the credit of 1847, of 4753*l.*, which gives for the single month of April a gross total of more than 11,000*l.* in excess over the same month of the year preceding.

NEWCASTLE AND BERWICK RAILWAY.—It is expected that this line will be opened throughout for general traffic on the 18th of June.

BELFAST AND BALLYMENA.—"From the present forward state of this undertaking (says Mr. Lanyon, the company's engineer), and the extensive plant now in active operation, all doubt is removed as to the possibility of the line being opened in December next—a period of little more than 21 months from the time it was commenced."

NORTHERN COUNTIES UNION RAILWAY.—The contracts on this line are being commenced with vigour, and the calls have been paid up most promptly. The directors, it is understood, do not intend to make any further call for some time to come, as they have now sufficient funds in hand. This will connect, in the most direct manner, York and the South-Eastern portion of England with Carlisle, Glasgow, &c.

SIGN OF THE TIMES.—It is said that a great railway man has borrowed 100,000*l.* for two years, at 10 per cent. per annum.

# Mining Correspondence.

## ENGLISH MINES.

BARRISTOWN.—The ground in flat-rod shaft sinking is rather improved in appearance; we hope to discover a part of the main lode by sinking this shaft. The 18 fm. level end west, on main lode, continues to look well; it is worth about 18*l.* per fm. The 12 fm. end west is worth about 12*l.* per fm. The stopes from the 12 to the 18 fm. level on middle lode, as also the ends, are worth about 16*l.* per fm.; in the winze sinking under this level, the lode is still poor. The back of the 12 fm. level is worth about 10*l.* per fm. We have intersected nothing further worth remark at Clon Mines since my last.—T. Angove; G. White: May 22.

BEDFORD UNITED.—At Wheal Marquis, the lode in the sump winze in the 80 fm. level, is 3 ft. wide, and worth 15*l.* per fm.; the lode in the 80 fm. level east is 3½ ft. wide—saving work. In the 70 fm. level east the lode is 2 ft. wide, composed of spar, mundic, and ore. There has been no lode taken down in the 58 fm. level east. At Liscombe, the lode in the adit level east is 2 ft. wide; and in the rise in this level, the lode is 2 ft. wide, producing good stones of ore; the south engine-shaft is 2 fms. 4 ft. 6 in. under the plat lode—3 ft. wide, spar, iron, and ore—saving work. There has been no lode taken down in the adit level east.—James Phillips: May 25.

CUBERT SILVER-LEAD.—This week the sumpmen have commenced sinking the engine-shaft below the 35 fm. level. The lode going east, at the 35 fm. level, is divided into two parts, each being about 10 in. wide, chiefly of a hardish spar, mundic, and lead; the end is also very wet; in the western end, at this level, we have much the same appearance. In the 25 fm. level east, the lode is 2 in. wide, 6 in. of which is saving work for lead; in the western end here the lode is 1 ft. wide, and chiefly saving work—a very promising level; the 15 fm. level going east is a promising level, 2 ft. wide, mixed in soft, sugary spar, prian, mundic, and lead. The pitches in the 25 fm. level are getting pretty well worked out, the ground having been the greater part taken away, and have answered well. Capt. Oates, the lord of Trebiskin, has kindly and liberally consented to lessen the dues, from 1-16th to 1-20th, at his option—beginning with May month.—R. Rowe.

DEAN PRIOR AND BUCKFASTLEIGH.—In the 30 fm. level there is no alteration since my last report. In the 40 fm. level end, the south part of the lode is looking more favourable; in the stopes, in the bottom of this level, the orey part of the lode is about 12 in. big, saving work for copper. In the stopes, in the back of the 50 fm. level, east of the winze, the lode is 2 ft. wide, producing some saving work; in the 50 fm. level end west the leader part of the lode is 18 in. big, saving work; this is the south part; the north part of the lode being cut through about 8 fms. behind the present end, is about 8 ft. wide, and of a very promising character.—H. Choake: May 25.

DEVON AND COURTENAY CONSOLS.—The 30 fm. cross-cut is in 9½ fms.—ground still continues favourable for driving, and water coming out of the end. We have cut a cross-course in the deep adit about 1 ft. wide, underlaying east, composed of flookan and spar, which I suppose has hove the lode north, as that has been the case in the adit driven on a cross-course near the entrance, and I have put the men to drive north. In the shallow adit, driving east (on north lode), there is an improvement in the lode since my last; lode 20 in. wide, composed of mundic and spar, and good stones of copper ore in parts—looking very promising.—J. Job: May 25.

EAST ALVINNEY.—We have forked the water out of the old workings on the north lode, and are clearing it up; we hope to commence breaking of tin in a day or two. I inclose you a stone of tin broken yesterday.—J. Spargo.

EAST CROWNDALE.—In the past week the sumpmen have been engaged cutting plat, &c., which is nearly finished; so soon as this is completed, we shall proceed to cut cistern plat, bearer holes, &c., for new lift. The lode in the shaft, at Rix Hill, is very much improved in appearance, is now 20 in. wide, composed of spar, peach, mundic, capel, and tin. On Friday night we took down a piece of lode, excellent work. The ground in the adit level, towards the Rix lode, is still a close killas; we have cut a stream of water, which indicates a lode, or branch, to be near. Our engine and pit work is in good order.—S. Paul: May 22.

EAST TAMAR CONSOLS.—We are now preparing for sinking the lode in the 64 fm. level, north and south; it is 15 in. wide, and a very promising lode. The lode in the 60 north is 18 in. wide—just the same appearance as last report; the lode in the 60 south is 18 in wide—good work. The lode in the 54 south is 14 in. wide, capel and silver-lead ore.; the 54 north is still in slidy ground. The lode in the 46, south from Gourd's, is 2 ft. wide—saving work. At Furzehill, the lode in Harrison's shaft is 2 ft. wide—good saving work. The lode in the 46 north is 18 in. wide—good work; the lode in the 46 south is 2 ft. wide, producing good work. The lode in the 38 north is 15 in. wide—fluor spar and ore; the lode in the 38 south is 20 in. wide—work of a good quality.—B. Robins: May 25.

GADAIR MINE.—According to request, I have carefully and minutely examined the strata, lodes, and features of the Gadair Mine, and beg to draw your attention to my views respecting the same. The sett is situate at the north-west point of the island of Anglesea, embracing an area of about 1600 fathoms from east to west, on the course of the lodes, and 650 fms. from north to south; the strata on the north-west part of the sett are imperfect granitic and porphyritic rock passing into killas, which forms the other parts of the sett; this is traversed by several large lodes or metallic veins, the properties of which will be considered in detail. The northernmost, or Hound's Cave, lode pursues a course very nearly east and west through the entire length of the sett; it has been found to average 18 ft. wide, fine gossan and quartz, producing portions of copper and lead ores very near the surface; the south part is chiefly quartz, to the north of which is a leader of decomposed slate, on which an adit has been driven from the sea for a considerable distance, and which is still continued; this level comes in 10 fms. below surface; from this I broke excellent specimens of copper pyrites, and there are evidences that considerable quantities must have been extracted by other parties. A few fathoms south from the lode described there are several large branches to be seen in the cliff, composed of quartz, gossan, &c.—some of them producing oxide, carbonate, and yellow copper, and sulphuret of lead; these have been denominated west point lode; they have not been explored—consequently, it will be premature to say more about them at present. Fox lode is also to be seen in the western cliff, running about east and west—it is 6 ft. wide, quartz. Towards the south side of the sett several pits have been sunk from 4 to 5 ft. deep, on a large gossan lode, which can also be seen in the cliff, where it is about 1 ft. wide; the whole of the lodes adverted to dip north at easy inclinations, and can be conveniently explored at moderate depths, by having levels driven on them from the sea, by which their value can be more correctly ascertained. There are also three lodes situate near the Fox lode, in the cliff, d enominated caunters, from their oblique direction to the other lodes; their course is about south-east—one, called the sulphur lode, is 5 ft. wide, dipping south-west at an angle of 15° from vertical; it is chiefly spar, with large quantities of mundic, and some black oxide and yellow copper ore; the other two caunters are of large size, and their composition quartz, stained with oxide of iron. I think it very desirable that a level should be driven on the sulphur lode a little above high water mark; and as the lode produces copper in the cliff, it may farther improve inland. I have already stated that the adit is in course of driving east, on the north part of the Hound's Cave lode; and I would advise that the number of hands there should be increased, so as to prosecute the level with all possible expedition, and get under the fine gossan to be seen at surface, about 50 fms. before the end; and, at the same time, a winze should be sunk below the adit, where the lode has been productive; and, also, that the large lode standing south of the adit, should be cut into in several places, to ascertain its character, and, if practicable to do so with the water, a shaft should be sunk on the gossan immediately. It would also be judicious to extend the adit south from the eastern shaft to intersect the west point lodes, which cannot be far distant; these works would place you in a position to determine on the most advantageous site for an engine-shaft to drain the mine. I consider the Gadair sett to be a fine piece of mineral property, presenting in its geological features a striking similarity to the celebrated Parys Mountain Mines, which I visited in the vicinity, and which have yielded such princely fortunes to their proprietors, and I have no doubt, if the operations be carried out with spirit and economy, the shareholders will be amply remunerated.—J. B. Clymo: *British Mining Office, 41, Moorgate-street, London, May 24.*

GREAT MICHELL CONSOLS.—The engine-shaft is down below the 22 fm. level 12 fms., the lode in which is composed of spar, mundic, fluor, and stones of ore. In the western winze, the lode continues to produce some good grey, black, and yellow copper ore.—T. Richards: May 25.

GREAT WHEAL MARTHA.—The cross-cut is now driven towards the lode 9 fms. 1 ft.; there is scarcely any alteration in the ground since my last report, except the floor of spar we had in the end at that time is not quite so thick. I stated, in my last, that we should finish our new pitwork by this time; but, owing to a delay at the foundry in not sending the rod-plates and some of the pumps, we were obliged to suspend our operations for the time. I expect to have the remainder of the pumps and plats by Saturday next. At Sherrall's, we have sunk 7 fms., and the lode is 3 ft. wide, composed of capel, peach, and soft spar; and I have no doubt it will make tin in depth.—Thomas Penaluna: May 22.

GUNNIS LAKE.—At Chilsworthy, I beg to inform you, that Bailey's engine-shaft is 8 fms. 1 ft. under the 12 fm. level; the lode is 3 ft. wide, producing good stones of ore. In the 12 fm. east we are still driving south; and in this level west, we have not yet got through the great cross-course.—William Richards: May 25.

HEIGNSTON DOWN CONSOLS.—The lode in the 20 fm. level west is 3 ft. wide, producing good saving work; and in this level east, the lode is 2½ ft. wide—good work. The pitch in the back of the 20 fm. level west is yielding good returns.—W. Richards: May 25.

HAWKMOOR.—We have cut the lode in the 15 fm. level, east of Hitchins's shaft, the which is 2½ ft. wide—spar, capel, mundic, and good stones of ore.—P. Richards: May 25.

HOLMBUSH.—There is no alteration in the ground or branches in the diagonal shaft, sinking below the 120 fm. level, since last reported on. The lode in the 120 fm. level, west of the great cross-course, is 12 in. wide, principally spar and killas, with spots of copper ore; the lode in the 120 fm. level, east of Hitchins's shaft (on the north part), is 16 in. wide, composed of mundic, spar, and stones of ore; the present end is to within 4 fms. of the eastern winze sunk 11 fms. below the 110 fm. level, where we expect to make the communication at the end of another month. The lode in the 110 fm. level, east of Hitchins's shaft (on the south part), is 10 in. wide, composed of soft spar and stones of rich copper ore; the lode in the 110 fm. level south, is 16 in. wide, composed of spar, prian, and stones of lead—saving work. The lode in the 100 fm. level south, is 2½ ft. wide, composed of hard spar, with a small branch of lead on the eastern wall, worth 6*l.* per fm.; the ground in this end has been much harder of late than heretofore, so much so, that the ground will stand without being timbered, but the progress in driving is but slow; the lode in the rise, above the back of this level, is 20 in. wide, composed of soft spar, prian, and lead, worth 8*l.* per fm. The lode in the 90 fm. level south, is composed of spar, flookan, and spots of lead. The week following our next copper sampling, we hope to have 10 tons of rich silver-lead ores for sale, independent of the halvans.—W. Lean: May 25.

ILAM.—The lode in the 42 fm. level, west of Robins's shaft, is improving as we drive on; the lode is large, and we are meeting with vughs, and I think, ere long, we shall have copper. In the 67 fm. level, west of the shaft, the lode is in a disturbed state, owing to a cross branch we cut; and it has hove the lode a little to the north. I have ordered the men this morning to keep in more to the north, in order to get through the lode as fast as possible; in the 67 fm. level, east of the shaft, the lode is looking kindly; I have still two men clearing attle, and it will take a week or ten days more to clear it—and then I think it advisable to clear up 10 fms. on the perpendicular lode, which can be done at a very small cost, as Robins's lode will form a junction with this lode in about 10 or 12 fms. driving—I mean the 67 fm. level west will form a junction with the perpendicular lode.—J. Sprague: May 27.

KIRKCUDBRIGHTSHIRE.—At the bottom of Stewart's shaft we have not done much since my last, by reason of a breakage of one of our tooth wheels. The end driving west in the 30 fm. level, has also been thronged with stuff; these men are now engaged rising in the back of an old pitch, in the roof of the 20 fm. level, west of shaft, to effect native ventilation—an object greatly required; the lode in the 30, east on the caunter, continues large and productive, worth 9*l.* per fm.; the rise in the junction in the roof of this level is also productive, as before stated, worth 40*l.* per fm. The lode in the 20 end west is increasing—large, and a deal of water; we suppose we are very near the junction, but without lead; the 20 east is still without lead, though kindly. All our stopes continue good, and we are raising more ore than we can engage to dress upon the present principle of dressing.—Joseph Buzzo: May 22.

KIRKCUDBRIGHTSHIRE.—We have to-day discovered a great increase of lead in the 20 west; the lode is large and exceedingly promising, producing, I should say, 1 ton per fm.; we consider we are now within a very few feet of the junction, and hope to see here the like results as in the 30 fm. level. The 30 east, on the caunter, does not look so well as it did, being disordered by a horse of ground; in the rise, on the junction, we look as well as ever, and our stopes, on the whole, continue good. We have engaged the *Mary* to take our lead to market; she is expected into port by the end of this, or beginning of next, month. Our dresser considers he will have about 35 tons ready by that time.—J. Buzzo: May 26.

LEWIS.—Since my last report we have holed tin shaft, in the 60 fm. level; the lode was worth 10*l.* per fm. for 6 fms. below the 50 fm. level; towards the bottom the lode became disordered, and not so productive, though saving work for tin. The lode in the 60 end east is 3 ft. wide, worth 3*l.* per fm. for tin, with a very promising appearance. The lode in the 50 end east is 4 ft. wide, worth 15*l.* per fm. for tin, with good indication of being very productive; the lode in the 50 east, on south branch, is 6 in. wide, worth 5*l.* per fm. for tin. The lode in the 40 end east is 2½ ft. wide, worth 8*l.* per fm. for tin. I think our prospects, generally speaking, are very encouraging. The tributers are making fair wages at their different tributes, and working with spirit.—S. S. Noell.

MENDIP HILLS.—The lode in the 38 fm. level, south of shaft, is become much larger than when I last wrote you, being nearly 7 ft. wide, composed principally of dark-coloured flookan and soft white spar, intermixed with large stones of lead; the lode in the winze, sinking below the 38 fm. level, is at present in a disordered state, occasioned by the large cavern we have gone down in this part, ground favourable for sinking. In the slag department I have nothing particular to notice this week; the bed of slag from which the top rubbish is now being removed, continues to look remarkably well. The carpenters are now busily engaged making launders; I hope shortly to commence laying them in this place, when no time shall be lost in getting the water around the hills.—F. C. Harpur: May 24.

NORTH WHEAL FRIENDSHIP.—*May* 22.—By your request, I have carefully inspected this mine, and although just in its infancy, still it holds out great hopes of success; its situation is indeed very favourable, and the advantages connected with it very great, being only six miles from Tavistock, where materials of any kind may be easily procured; there are good roads leading to the mine, and, in addition to this, there is an inexhaustible supply of water running through the sett, close to the entrance of the mine, that would greatly facilitate the workings in draining the mine, washing the ore, &c. The sett is very extensive, and is within a short distance of the granite formation, and in the immediate vicinity of Wheal Jewel Mine, where so many thousand pounds' worth of tin were raised. In sinking a shaft 3 fms. deep, on Wheal Friendship north lode, and driving west a short distance, a good heap of tin ore has been raised; stones of tin are to be seen on the floor, from 40 lbs. to 50 lbs. weight each, excellent work; and in the back of the level good tribute ground is opened on; west of the present workings, on the back of the lode, shode pits have been put down, here the lode was found to be 3 ft. wide, quite regular; bearing nearly east and west, underlay 1 ft. in a fm. north, composed of quartz, fluor-spar, and capel, with tin and copper ore of an excellent quality. There are two other parallel lodes passing through the sett, that will, no doubt, be opened on immediately. In conclusion, I can say, from present appearances, that if this mine is prosecuted in a miner-like manner, the shareholders will be amply remunerated for any outlay of capital that may be required in fully prosecuting the mine.—James Hosking.——P.S.—Since my inspection of this mine, I have been creditably informed by a practical mine agent, that a great improvement has recently taken place in the adit level, the lode being now 2½ ft. wide, producing tin ore of an excellent quality; this change I fully expected when I visited the mine, in consequence of the congenial strata of clay slate that extends from the present workings to the western extremity of the sett.—J. H.——*May* 26.—I am happy to inform you, that we are continuing to improve, and are now breaking large stones of copper ore, better than we ever saw before, with our lode also improving for tin.—James Harris, Jun.

SOUTH TAMAR UNITED.—The engine is working very satisfactorily; we have forked the water 22 fms., which is down to the first cross-cut, where we shall be obliged to put in bearers and cistern, to fix the first lift, and then drop the next lift to the 40 fm. level, to prepare for fixing the plunger-lift, which I hope we shall be able to complete without much difficulty. The men in the adit level have cleared and secured 4 fms. since last report.—B. Robins.

SOUTH WHEAL MARIA.—The cross-cut north is driven 5 fms. from the shaft, and we calculate there is about 6 ft. more to the first lode north of shaft; we have discovered a branch this week underlaying north about 1 ft. in a fm., which has increased the water pretty much—it is composed of prian, mundic, &c.; the cross-cut south is about 4 fms. from the shaft, this level is rather wet; from its appearance I am led to suppose that we are near a lode, but from their run at surface, it would appear that there is 6 or 8 fms. more to drive; neither are we certain how quick the lodes underlay, as they have only been seen but a few feet under the surface. I hope to be able to report next week that we have cut the first lode north of shaft, and that the appearance may be highly encouraging, although I have much more confidence in finding the second much more productive—this being about 20 fms. farther north.—G. Francis: May 27.

SOUTH WHEAL TRELAWNEY.—Soby's lode, in the adit south, is about 2 ft. wide, composed of gossan, silver brights, white killas, and prian—ground a little harder than last mentioned; the cross-cut, west of Snell's shaft, is still driving; ground just the same as last mentioned, and water.—W. Jenkin.

TAMAR SILVER-LEAD.—In the 160 fm. level, south of the shaft, the lode is 1 ft. wide, producing a small quantity of ore. In the 145 fm. level, south of the shaft, the lode is 18 in. wide, unproductive. In the 135 fm. level the lode is 2½ ft. wide, orey throughout, and leaving backs that will work to advantage. In the 125 fm. level the lode is 6 in. wide, rich work. In the 160 fm. level, north of the shaft, the lode is 18 in. wide, composed of spar, capel, and ore—good stamp work. In the 145 fm. level, north of the shaft, the lode is 1 ft. wide, producing work of a good quality—a promising end. At north mine, in the 60 fm. level, north of the shaft, the lode is 3 ft. wide, 1 ft. of which is rich work. We have suspended driving, and put the men to cut further west in the old cut, as we have every reason to believe the mean part of the lode is still further west.—J. Sprague.

TINCROFT.—No material alteration has taken place in the north mine since my last report. At Palmer's, we expect the water will be in fork to the 70 fm. level by the end of this week, when we shall be able to set 16 or 18 more men to work; the places now working are producing fair quality work for ore. In the south mine, the engine-shaft, the 152 east and west, and the 142 east, continue to produce fair quality tinstuff. The lode in the rise, in the back of the 142, is producing good work for tin. The lode in the winze, sinking below the 120, has improved for copper ore in the past week, now worth 15*l.* per fm.; the lode in the 120 east is 4 ft. wide, worth 20*l.* per fm. for tin. We are now rising in the back of the 100, to hole to a winze in the bottom of the 100—good lode for tin in each place. Copple's lode is still looking well in the pitches in the back and bottom of the 100, and in the back of the 90, fm. levels. The 90 west is producing saving work for ore. At Wheal Providence, cutting down the engine-shaft, the ground is harder than we anticipated; it will still take us several days to complete the shaft to the adit. Our surface operations are still going on well.—W. Paul: May 24.

TRELEIGH CONSOLS.—In the 110 fm. level, north from Christoe's, we have cut into a part of the lode 18 in., but we have more still north; it is mundic and spar, with stones of ore. In the rise, above the 100 east, the lode is 18 in. wide, worth 6*l.* per fm.; this is under the winze which is sinking below the 90. In the winze, below the 90 east, the lode is 18 in. wide, worth 15*l.* per fm.; we have a pretty deal of water in this. In Garden's shaft, below the 90, the ground is very hard and wet; in the 90, west of ditto, the lode is 20 in. wide, producing good stones of ore, not to value. In the 80, west of ditto, the lode is 2½ ft. wide, worth 14*l.* per fm., and has a very promising appearance; in the 80, east of ditto, the lode is 16 in. wide, worth 20*l.* per fm.; the rise is suspended, being poor. In the 70, west of ditto, the lode is 2 ft. wide, producing good stones of ore, and kindly. In the bottoms of the 70, east of Symons's, the lode is 2 ft. wide, worth 8*l.* per fm. In the 60, west of Symons's, the lode is 2 ft. wide, worth 5*l.* per fm. In the winze, below the 50, west of ditto, the lode is 2 ft. wide, worth 6*l.* per fm. In the adit end east, on Wheal Parent lode, the lode is 2 ft. wide, yielding good stones of ore, and a very promising lode—saving a part of it to dress.—W. Symons: May 22.

UNITED HILLS.—In the 90 fm. level, eastern end, lode 3½ ft. wide, worth 8*l.* per fm.; western end, lode 3½ ft. wide, worth 15*l.* per fm.; the lode in the stopes is 2½ ft. wide, worth 23*l.* per fm. In the 80 fm. level, eastern end, lode 3 ft. wide, worth 15*l.* per fm.; west of cross-cut, lode 2½ ft. wide, worth 12*l.* per fm. In the 70 fm. level, lode 3 ft. wide, worth 10*l.* per fm. The end, in the 60 fm. level, has been suspended since August last; shallow adit, lode 3 ft. wide, worth 6*l.* per fm. At Wheal Charles, in the 40 fm. level, lode 2 ft. wide, worth 6*l.* per fm. At Wheal Sparrow, in the 40 fm. level, lode 2 ft. wide, worth 7*l.* per fm. In the 30 fm. level, western end, no lode broken since survey day; in the winze the lode is 7 ft. wide, worth 15*l.* per fm. In the winze, in the 20 fm. level, the lode is at present disordered by a cross-course, as such we cannot report its real value.—T. Trevenen; R. Williams: May 25.

WEST WHEAL JEWEL.—In the 115 fathom level, east of cross-cut, on Wheal Jewel lode, the lode is 20 in. wide, producing little ore. In the winze, in the bottom of the 100 fm. level, east of cross-cut, on same lode, the lode is 2 ft. wide, composed of spar, mundic, and prian, with spots of ore; in the 100 fm. level west, on same lode, the lode is 10 in. wide, worth 3*l.* per fm. In the winze, in the bottom of the 85 fm. level, west of cross-cut, on same lode, the lode is 18 in. wide, unproductive. In the 70 fm. level, west of cross-cut, on same lode, the lode is 1 ft. wide, worth 8*l.* per fm. In the 30 fm. level, west of Quarry shaft, on Tolcarne tin lode, the lode is 2 ft. wide, worth 12*l.* per fm. In the 12 fm. level west, on same lode, the lode is 18 in. wide, worth 12*l.* per fm.; in the 12 fm. level, west of old sump shaft, on same lode, the lode is 2 ft. wide, worth 12*l.* per fm.; in the 12 fm. level, east of Rowe's winze, on same lode, the lode is worth 6*l.* per fm.; in the winze, in the bottom of the 12 fm. level, west of Quarry shaft, on same lode, the lode is worth 12*l.* per fm.; in the stopes, east of Quarry shaft, on same lode, the lode is 3 ft. wide, worth 20*l.* per fm. In the adit end, west of Quarry shaft, on same lode, the lode is 18 in. wide, worth 10*l.* per fm.; in the stopes, east of Pryor's winze, in the bottom of the adit, on same lode, the lode is 2½ ft. wide, worth 25*l.* per fathom.—R. Johns; T. Bray: May 24.

WEST WHEAL MARIA.—The eastern engine-shaft is down about 36 fms.; the lode in this shaft is looking much better than ever I have seen it before—it is about 5½ ft. wide; 18 in. of the north part of this lode is saving work, and it is a very promising-looking lode; the western engine-shaft is down below the 54 fm. level, east of this shaft—it is about 2 ft. wide, producing spots of ore occasionally; in the cross-cut south, at this level, the ground is much the same for driving as last reported.—T. Rodda: May 25.

WHEAL ADAMS.—Nothing has been done in the engine-shaft during the last four days; the operations have been suspended while the tributers' stuff was being removed from the pitches, and drawn to surface; this is partially done, and the workings are this morning resumed. The winze sinking on tribute, in the 40 fm. level, is in favourable ground, the lode producing ¾ ton of lead ore per fm. No alteration having taken place in the appearances of the lode at the 28, on which a level has been extended a few fathoms north and south in a mass of gossan, we abandoned this part, and have placed the men to cross-cut both the middle branches and western silver-lead lode, about 30 fms. further north, about which they are productive and profitably developed; we have also commenced cross-cutting west at the extreme north end, for the purpose of proving the western silver-lode in this direction. The lode in the 18 fm. level, extending north, is 2½ ft. wide, consisting of barytes, accompanied by small veins of lead and mundic, presenting very favourable indications; but I fear the operations here, too, will soon be suspended, owing to the accumulation of stuff, and hence a deficiency of air. A small shaft should, in our opinion, be sunk from the surface on the course of this lode, which would both expedite its development, and save a vast expense in wheeling; it is satisfactory to know, that the lead in this lode, accompanied by barytes, and seen only at the 18, the farthest point north yet attained, contains more silver than it does elsewhere, as the following results will show—viz.: No. 1, 18 fm. level north, 10 cwts. 2 qrs. 7 lbs. of lead, and 40 ozs. 1 dwt. 12 grs. of silver in 20 cwts. of the ore.—2, 40 south, 40 per cent. of lead, 25½ per cent. of antimony, and 31 ozs. 3 dwts. 6 grs. of fine silver in 20 cwts. of the ore.—3, 50 ditto, brown jack, 9 ozs. of silver in a ton of ore—4, ditto, black jack, nil.—5, 28 gossan, 8 ozs. of silver in a ton of ore.—6, ditto, ditto from the south part of the mine, 4 ozs. of silver in a tonof ore.—7, ditto, 20 ozs. 5 dwts. 12 grs., ditto, ditto.—8, average produce of the copper ore 3½ per cent., and 9 ozs. 10 dwts. of silver in the ton of ore. Nos. 5 and 6 consisted of much friable quartz, mixed with a small proportion of peroxide of iron. No. 7 contained less quartz, with an excess of iron, with which the silver is evidently combined. The antimony in No. 2 proceeds from the middle branches, which have united with the western silver-lead lode, in the south part of the mine—and thus it produces lead, antimony, and silver. Samples from the levels not named have not yet been assayed—other duties devolving on me in the mine prevents my accomplishing this object for the present. We weighed, on Friday last, and shipped yesterday, for Messrs. Vivian and Sons, 124 tons of blende, and shall ship a similar quantity as soon as vessels can be procured.—J. Prince: May 25.

WHEAL BARBARA.—I have carefully inspected Wheal Barbara, near Wadebridge, Cornwall, and find that the adit has been opened on the course of the lode for about 55 fms. in length, in which the lode is running nearly east and west, and dipping south, at an angle of about 20° from vertical. For about 15 fms. towards the west, or near the engine-shaft, the lode averages 8 in. wide, and is composed of quartz, sulphurets of lead, zinc, and spots of yellow copper ore in places; which has been analysed by eminent chemists, and found to produce from 30 to 63 ozs. of fine silver to the ton. Further east in the adit, the lode varies from 2 ft. to 4½ ft. wide, chiefly quartz, and occasionally producing spots of galena, mundic, and blende, and, in some places, a branch of decomposed clay slate; on this lode two shafts have been sunk to the level of the adit, which is 5 fms. below surface, but which will be unnecessary for me to notice in detail. The engine-shaft (Williams's) is now 3 fms. below adit, and is expected to take the lode, when sunk, 3 fms. deeper, which I advise be done with all convenient expedition. Your new pumping machine is rather a novelty in mining, but with repairs, and a man in constant attendance on it, it may enable you to go down a fathom or two more, should wet weather continue, which I think you had better proceed about; and, in the meantime, erect a horse-engine, as advised by Capt. Stevens, and sink from 12 to 15 fms. below adit, and afterwards drive on the lode in that level, which will place you in a position to say how to proceed in future. There are also indications of other lodes, both north and south, to be seen at surface, which you will do well to explore without delay. I consider the strata congenial for deposits of silver-lead ore, and you are fully justified in prosecuting the works, as above advised.—J. B. Clymo: *Wheal Concord, May* 15.

WHEAL BENNY.—The depth of the shaft is about 18 fms. 3 ft.; and, as we intend to sink 20 fms. before we drive, we shall have 2 fms. 3 ft. deeper to go down in allowing 6 ft. for a fork; at this point we shall have to drive north about 7 fms. to intersect our two most northerly lodes; and in our opinion, from the indications they present near to surface, which are of a highly favourable nature, the situation of the present shaft is well adapted for the development of the Benny lode, and a cross-cut, taken out south about 25 fms., would intersect the Benny lode at the above-named point, which would be 20 fms. from surface—this also is of a highly promising character, and, we think, may be expected to prove productive in depth; the lodes are composed mostly of a beautiful gossan, and impregnated with copper throughout, samples of which you have already seen. Our cross-cut south is driven about 20 fms.—this cross-cut is intended to intersect all south lodes; and will, as before stated, prove them at a given depth, at about 50 fms., without the aid of machinery. Fearing our present wheel will not be of sufficient power to keep water when we come in contact with the lodes, we should recommend a 60-ft. wheel, and we will send you an estimate of the amount of cost, if requested, immediately.—J. Tabb; T. M. Penaluna: May 23.

WHEAL ROSE.—Beginning at the adit level, my attention was first called to the side, or east lode, which is distant from the main lode 30 fms.; and this (the adit level) is opened on its course 100 fms., in which distance it averages from 6 in. to 2 ft. in width, composed of spar, gossan, and spotted in several places with lead; in the end, which is at present driving north, lode 9 in. wide, producing good stones of lead in a fine gossan—this lode, which I consider to be of a promising character, has not as yet been seen under the adit; but there is a cross-cut driving in the 30 fm. level, which is expected to intersect it in about 5 fms. from the present end; in the 30 fm. level, on the main lode, driving north, lode 1 ft. 6 in. wide, white iron and spar, spotted with lead—not rich at present. In the 42 fm. level north, lode 20 in. wide, much as in the 30, but

producing rather more lead. In the 52 fm. level north, lode 2 ft. wide, spar and white iron, with spots of lead—poor; this level has yet from 20 to 30 fms. to run to the principal part of the ore ground worked, and that is still in course of working; in the level above the 52 south, lode 2 ft. wide, spar and white iron, with good stones of lead—this is expected shortly to get into a good run of lead ground, that has been worked in level above; judging from appearances, I should say that the change may be expected at once, the nature of the ground being quite altered, and a large stream of water issuing from the lode, which has previously been comparatively dry. Taking the mine on the whole, I am of opinion that the present rate of proceeds may be continued some time longer, with chances of an increase from the 52 south; and should the east lode be also found productive in the 30 fm. level, much greater quantities of ore may be expected.—[The above report has been received from a well-known practical agent, who had been instructed by some of the London adventurers to inspect and report thereon—we are, therefore, indebted to the latter for a copy of the same.]

WHEAL EMMA.—We have suspended the driving in the 22 fm. level, and also in the adit level for the present; the principal object is, to get down the engine-shaft with all possible despatch, having just discovered a branch, which is 5 fm. big, composed of flookan, spar, and mundic, with some spots of ore; this branch is dipping very fast into the south lode, which are good indications. The depth of shaft below the 22 fm. level is 9 fms.—therefore, we shall make all the progress we can to get the engine-shaft down to its intended depth, being so desirable an object.—H. CHOAKE: May 25.

## MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

ST. JUST.—The following are the particulars of a few of the best paying mines in the parish of St. Just, which will be perused with interest:—

BALLESWIDDEN AND WHEAL SPEARNE are considered by competent judges to be the safest and most valuable speculations for investment in the west of Cornwall, showing an actual return on the present price of shares of about 20 per cent. per annum. Balleswidden has paid 16 dividends, and given about 30 per cent. to the original shareholders; the workings on the mine are now on a very extensive scale, and still continue to increase as the mine is laid open, which is now carried on at the present time with increased vigour; the state of the mine generally was never in such a prosperous condition as within the last two months, several lodes having turned up beyond expectation; the account of this mine is held every two months; this is the largest mine, and worked on a more extensive scale than any west of Carn Brea. Wheal Spearne has paid the original shareholders the whole of their outlay, and interest for the same; the dividends now equal a return to the fortunate shareholders of above 90 per cent. on their outlay—the account of this mine is held every three months.

HERLAND MINE, about 1½ mile north of Wheal Tremayne, produced many years since a large quantity of silver ore; the varieties being chiefly the native silver, vitrious ore, and arsenical and antimonial silver ore. The above circumstance clearly shows the necessity of far more careful and general assays than are at present made—not at this mine in particular (for there appeared nothing in the parcel now sold to lead the agents to believe it different in value from former lots), but at most mines which show a variety of mineral products, as there can be no doubt of valuable substances being occasionally entirely lost, from the absence of such strict examination.

WHEAL TREMAYNE.—The adventurers in Wheal Tremayne have been gratified, during the past week, by an unexpected circumstance. It has been their practice occasionally to sell a small parcel of lead ore to the Penpoll Smelting Company, the previous value of which has been about 13*l.* per ton. A few days since, on sending what was considered a similar lot to the same works the agents were delighted at receiving 158*l.* 6s. per ton—making, for the parcel of 1 ton 16 cwts. 2 qrs., an amount of 282*l.* 13s. 6d. As it is not improbable the silver exists imperceptibly to the eye in the arsenical pyrites, and as examinations and assays will be made, both of what is on the surface and from the lode itself, it is premature to form an opinion of the real importance of the discovery thus made, though there appears good reason to anticipate something satisfactory.

CAIRNSMORE.—The 20 fm. level end west has greatly improved since the report, and now worth 1 ton per fm., and is within a few feet of the junction with the caunter.

CONDURROW.—This mine is daily improving. We understand the 50 fm. level, on the old lode, is worth 8*l.* to 10*l.* per fm. for tin. The 30 fm. level west, on a lode supposed to be a new lode, is worth 20*l.* per fm for copper. The 10 fm. level east, on Llandower lode, is worth 40*l.* per fm.; the adit end west is worth 18*l.* per fm.

WEST MARIA.—Information was received in the early part of the week, of a considerable improvement here. The lode in the eastern shaft is all the size of the shaft, and a leader of grey work, 18 in. wide, six of which turned out 2 to 3 tons per fm. A great many shares have changed hands during the past week, at advanced prices.

LYDFORD CONSOLS.—I am happy to inform you, the lode in the south adit, at Wheal Mary, is much improved since I wrote to you last; we have a lode in the end, at this time, that will average 2 ft. big—good saving work for lead; and it seems to be increasing in size as we go on. I do expect the next letter you have from me will enable me to say the lode is larger and better; but it is a good-looking lode at present, and I do not see any likelihood of its failing, because everything in and about the lode is promising for a course of lead; should it continue a few fathoms further, we shall have a good pitch to set in the back of this level. There ought to be a shaft sunk on the back of the level to ventilate it, as the air is rather bad; and, at the same time, the engine-shaft ought to be sunk—as it is under the adit level, we must expect to reap the reward.

WEST WHEAL SHEPHERD is still looking well in the 20 fm. level. I am informed they have 17 tons of best work, and upwards of 2 tons of the second, making about 20 tons, which will go to market next week. The branch of lead in the bottom end is very good, and is from 2 to 3 in. wide, and the lode continues as promising for improvement as she ever did. There is a good branch of lead in some parts of the pitch in the back of the 20 fm. level, and it is likely to improve in going west especially.

## ACCIDENTS.

*South Friendship Mine*—R. Almond had his leg broken by a stone falling.

*Great Wheal Friendship.*—As W. Whitburn was tamping a hole for blasting, in the 180 fm. level, it suddenly exploded, and killed him.—A lad, named Vargo, also had his arm broken by the same accident.

*Rowley Regis.*—R. Kendall was killed by a fall of ore in Mr. Purser's pit.

*Glascote, near Tamworth*—As T. Thompson and J. Ross were employed in one of the workings, with their naked candles, some accumulated sulphur exploded, by which they were both much burned.

*Dog Hill Colliery, Crampton.*—As a boy about nine years of age, named B. Wild, was at work in the colliery of Messrs. Wild and Smith, a large quantity of earth fell upon him, and instantly deprived him of life. Another individual narrowly escaped being killed at the same time, but a tub intercepted the fall of earth in the direction where he was. Deceased was the son of one of the owners.

*Moat Colliery, Tipton.*—J. Berdworth was killed by the shaft in a coal-pit giving way.

*Ingleton Colliery, Westmoreland.*—As T. Harrison and M. Kenyon were engaged sinking a pit, which had reached the depth of about 70 yards, Kenyon being at the top of the shaft, in the act of steadying the rope by which two other men were drawing the air box, when, by some means or other, his foot slipped, and he was hurled into the pit, and fell upon Harrison, who was sitting in a sling, a few yards distance from the bottom of the shaft, assisting in drawing the air box. The poor fellows were got out as soon as possible, but both were dead when they were drawn up—Harrison was shockingly mutilated.

*Moseley Hole.*—As B. Leadbeater was riding in a skip along the gateroad, he lost his light, and, while in the dark, was kicked by the horse in the lower part of his belly—he suffered great agony until he died.

*West Bromwich.*—T. Smith was killed while working in Mr. Bottley's Colliery.—J. Jones was killed by a fall of coal in Messrs. Bagnall's Colliery.

*Wednesbury.*—As J. Whitbrook was employed carting dirt from the railroad, at the works of Messrs. Lloyd, one of the loaded waggons was going up the railroad to the top of the blast-furnace, when the deceased laid down upon the railroad, and the carriage passed over his body, cutting it to pieces.

*Ocker Hill, Tipton.*—As S. Yough, a child four years old, was playing near an old coal-pit containing water, he fell in and was drowned.

*Bradley.*—J. Nickson had his spine injured severely at some iron works, in consequence of a railway waggon, which he assisted in rearing upright, and, neglecting to prop, fell upon him, he having incautiously sat down near it.

The General Mining Company for Ireland are about to commence operations in Balaherkey Lead Mine, the property of Hugh Singleton, Esq., at Hazlewood, county of Clare.

NEWQUAY CONSOLS MINE, LOWER ST. COLUMB.—This week, Mr. West, engineer to J. T. Treffry, Esq., with Capt. Puckey, his principal mining agent, set to work a powerful steam-engine, which went to work in the most satisfactory manner, starting as steadily as if it had been working for a month. The mine is worked for silver-lead, of which the ore is of rich quality, and the prospects are very cheering. The whole mine belongs to Mr. Treffry, and the dues also, as it is worked on his land. At the present price of copper, most of this gentleman's mines are in a prosperous state, and should the price continue, are likely to employ a greater number of hands. In addition to Mr. Treffry's mines of copper, tin, and lead, he has opened on his own land, in the parish of Withiel, certainly the best iron mine in the county, from which, if necessary, there will be no difficulty in landing 200 tons of ore per month.—*Cornwall Gaz.*

## ESGAIR-Y-MWYMN MINE, CARDIGANSHIRE.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—In compliance with your request, as to information respecting this mine, I beg to observe, that we commenced clearing and repairing the adit, water-courses, launders, water-wheel, rods, pit-work, &c., a fortnight yesterday; and on Saturday last got so far advanced in our work, as to set the wheel to draw the water out of the mine, which answers extremely well. We have not regularly kept the wheel to work until this morning (Monday), being obliged to stop at intervals, to drop the lift, and alter some trifling movements in our flat-rods and pit work, but up to this evening we have drained the mine about 4 fms. We have 12 fms. of pumps in the water, which, if no serious hindrance occur, we anticipate drawing dry by Friday evening; and we hope in the course of next week to find the 20 fm. level—a spot, we are informed, has not been seen for many years past. From every information we can gather, ere we reach the bottom, we shall find some good lead ores. When last worked, it appears the only resource to get the water up from the mine was hand-pumps, and a horse-whim, situated at the adit level, to draw the water lifted by the pumps, also the ores to that level; and then a wood railway, to take the ores to the mouth of the adit, at the bottom of the mountain. It appeared the water came too powerful for the means applied, and, either the parties not acquainted with the mechanical power of water-wheels, or not of sufficient courage to erect one, the whole mine was abandoned. Since that period some hundreds of tons of ore has, it appears, been raised between the adit and the surface, and a deal of money earned by the miners; and I find that the ground for some hundreds of fathoms has been taken away, even to the surface. We have not set any bargains as yet, having only a few men to do the necessary repairs in the mine at surface and underground, to attend to the pit-work, &c. As soon as we have a wheel to attach to a crusher we have on the mine, I think we can make a large quantity of ores from the halvans, or refuse stuff, left on the mine. All we examined has a very pleasing aspect.

*Esgair-y-Mwynn Mine, May* 24. JAMES RULE, Agent.

## NORTH WALES MINING COMPANY.

SIR,—After reading a report in the *Mining Journal*, of the 15th inst., on the mines belonging to the North Wales Mining Company, signed Absalom Francis, I think it is high time for us, as the working class, to ascertain the truth of such reports, as our bread partly depends on their correctness. I beg to call his attention, if he will have the kindness to answer me, to what he has mentioned in his late report. He says that there are good specimens of ore to be got in North Wales near the surface, but that there is no chance of the ore improving in depth. What did he see in the bottom of Clogan Mines? he says that he was acquainted with this country 20 years ago. Has he, or any one since the commencement of Clogan Mines, seen better prospects of copper ore, or as good as there is to be seen at present? But in respect of Vigra, I have seen better prospects than there are at present. Still I call this good orey ground, and the best of lodes vary much in their produce—at present, Vigra or Clogan are but surface workings, being but 25 or 27 fms. deep. He says the erection of machinery will be necessary—for what purpose? The present workings at Vigra are on the summit of a hill, upwards of 800 ft. above the level of the water, and Clogan 1200 ft.—when adit levels might be driven for less expense, and at the same time proving the lodes much better. On looking at the mines of this country, in the state they have been worked since my recollection (20 years ago), my humble opinion is that they never have been proved in a proper manner—all surface workings, and no trials to any depths—that few, if any of the mines in Merionethshire have paid is not to be wondered at; and it is to be regretted that a country possessing so many natural advantages for the workings of mines should have been so much neglected. It can be no satisfaction, or any proof that the mines in Merionethshire should not pay, because they have not, after being so badly managed. Take any mining country, and work in the same manner as Merionethshire mines have been worked—what would be the results? I am in hopes that Mr. A. F. will consider what he is doing, when he is writing reports, for he could not write in the manner he has done if he had properly examined the mine, (I mean and speak the truth, Mr. Editor), for reports based on supposition will not do in these days. From my own knowledge and experience in Merionethshire, I trust, Mr. Editor, you will consider this worthy of an insertion in your valuable and interesting paper.

*Dolgelly, May* 26. A WORKING MINER.

## WHEAL CURTIS MINING COMPANY.

SIR,—I see in your Journal of the 22d May, that you have made a grand mistake as to what I said at the general meeting of the Wheal Curtis shareholders, on the 18th inst. First, you have misunderstood me in stating, that "tin was lost sight of by the former adventurers in Wheal Curtis." Now, Sir, this was not spoken of Wheal Curtis; for it is well known among miners in Cornwall, that the former agents were too well acquainted with that metal to allow it to escape their notice. In reply to the question of a proprietor, "whether there was tin in Wheal Curtis?" I said I did not know, but that lodes in that neighbourhood often made tin in depth. And as to a "1000 of tin to a 100 sacks," it was spoken of a stone of tin broken from the 210 fm. level, in Wheal Abraham—not that the tin thrown away there was all worth 30*l.* per ton. As to my "having been an agent for 30 years," and upwards, is also a mistake on your part. I said I had been a miner during that period, out of which I had been agent 11 years only. With respect to the statement, "that a further outlay of 400*l.* would be ample," I can only say, that I gave no such estimate, nor am I aware that any one else did so.

By inserting this letter in the next Number of your valuable Journal, you will much oblige your obedient servant, JAMES CRASE.

*Gresham Rooms, Basinghall-street, May* 24.

[In reply to our correspondent, we can only say, that our notes of the proceedings extended over a considerably greater space than that occupied in our columns, and hence we made an abstract. A meeting of three or four hour's length is no trifle to report, and we believe such was done faithfully. We are glad to find that our errors (if such they were) are so few; and, by referring to our notes, we will endeavour to repair any faults or omissions while we refresh our memory; more especially, as we believe this is the first charge of a like nature made as to the inaccuracy of our reports. In the first place, Capt. Crase states, we misunderstood him in stating, that "tin was lost sight of by the former adventurers in Wheal Curtis," which he says is absurd, as "it is well known among miners in Cornwall, that the former agents were too well acquainted with that metal to allow it to escape their notice." On referring to our notes, we find the following as part of Capt. Crase's speech; and if the observation applies to Wheal Abraham instead of Wheal Curtis, we can only say, that oft as we have heard reports, or attended public meetings, we were never so misled. Capt. Crase observed: "Capt. Richards was agent at Wheal Abraham; he had inspected Wheal Curtis, and said the mine had never been worked one quarter. No one understood tin at the time, and they had never directed attention to putting out cross-cuts; tin then thrown away, 1000 tin to 100 sacks, worth 30*l.* a ton. Wheal Abraham is alongside same strata." Such is an extract from our notes; and we need hardly say, that in condensing them, we have preserved the spirit. If that we are told all these observations referred to Wheal Abraham, and not to Wheal Curtis, then we say, that such was not conveyed to the meeting; for it would be just as reasonable, or otherwise, in reporting on Wheal Fortescue, to enter into detail on the vast riches and productiveness of Wheal Maria, the adjoining sett. We now proceed to the next charge. Capt. Crase tells us, that in reply to a proprietor, "whether there was tin in Wheal Curtis, he said he did not know, but that lodes in that neighbourhood often made tin in depth." We can only say, that we did not hear the question or reply, while we will refer our correspondent to the first charge brought against us, the explanation given to which we are ready to maintain, by the production of our notes made at the moment. We are next told, that in speaking of "1000 of tin to a 100 sacks," it was spoken of a *stone* of tin, broken from the 210 fm. level in Wheal Abraham, not that the tin thrown away there was all worth 30*l.* per ton." Now, if Capt. Crase wishes the adventurers to understand that a *stone* of tin, in a neighbouring mine, at the great depth of 210 fms., affords any conclusive evidence that a productive lode at a shallow level is to be contemplated in the adjoining sett, then we consider that such an attempt to mislead the meeting, composed principally, as is usual, of out-adventurers, not practically acquainted with mining operations, is to be regretted. Capt. Crase tells us, that his statement of "having been an *agent* for 30 years and upwards," is all a mistake. We will again refer to our notes—"Has been an agent of tin, copper, and lead mines for past 30 years." What Capt. Crase intended to say, we do not know; but all we can say is, that we reported what was said. We now arrive at the fourth and last charge—viz., that in the report of the proceedings in our columns, it was stated, "that a further outlay of 400*l.* would be ample." Here we admit the error, which is one of the press, as our notes and copy gives 4000*l.* as the sum named. We need hardly say, that any one reading the abstract of the report, and with the fact of 1486*l.* 18s. 8d. being debts owing by the company, could not have been misled. However, the company have only themselves to blame, if any errors (of course not of the press) should appear, having withheld the reports and accounts, although oft application was made, so that the same might appear in our columns—at all times being anxious to give copies of the document itself rather than rough notes, which, at times, it is difficult to make, from the confused style in which reports are occasionally drawn up, or the manner in which they are delivered.]

[ADVERTISEMENT.]

## SOUTH WHEAL MARIA MINE.

SIR,—A letter appeared in your Journal of last week, signed "Sampson Vivian," in language rather strong in condemnation of the water machinery, and the support I gave to the erection of the same in South Maria Mine; in which S. V. justifies that which I contend was an untrue, overbearing expression of his, made at the last meeting (April 13)—viz., that the water machinery was 1000*l.* lost to the company; hence my postscript to the notice of call in the circular to the adventurers, showing that it was not true; which circular was referred to in S. V.'s letter in your paper. His name was not mentioned in my circular, but being, I suppose, rather elated with the term "Mining Agent," at once fathers the allusion, supposing, of course, his abilities deserving the high appellation of "Mining Agent." We now a-day hear men of different grades and professions setting themselves up for mining captains and agents; therefore, for the sake of perspicuity, to show the difference of the qualifications of the numerous gentlemen laying claim to this honour, I shall divide them into two classes: 1st. Those who early in life received instructions, and have practically become acquainted with all mining operations underground; who have acquired a considerable degree of scientific knowledge; who can level and dial ground, and prove by figures the pressure of water at any height, and in every position; that can show the adventurers, under every circumstance, how water-power, in any case, can (if possible) be made available for mining operations, to supplant the ruinous expense of steam-engines. 2d. Those who, through interest, have had the good luck to be taken from the shop, the office, the plough's tail; or where some kind friend has taken a poor brother of the fraternity by the hand, and lifted him from the rilling barrow underground (the only place, perhaps, he was fit for), and placed on his arm the stripes of captain, who at once forgets his ill qualifications and former occupation, and, like the mushroom grown up in a night, puts himself on an eminence on the first survey day, and, with much assurance, assumes the character of captain.

Of course our adventurers will enquire, like myself, to which class our boisterous friend Sampson belongs; and to find out during this controversy who this Mr. Somebody is, leaving them at the sequel to judge for themselves. First, I notice he speaks ambiguously of my analysis of the cost sheet, but in the next words declines disputing my figures, and gets over it by asking how many fathoms the shaft has been sunk during the six months alluded to. In reply to which, I boldly state, about 9½ fms.; and why more was not done was, because the steam party, on the 3d November last, vexed the cessation of all works, with a view, as was after clearly proved, of getting a fresh captain and purser of their own party. The former was rejected at a meeting held at Liskeard, December 3, and the latter, seeing his case hopeless, did not come to the poll. It is an untrue and reckless assertion of S. V. to say, that the machinery was ever inefficient or ineffectual; but, on the contrary, has been pronounced by better judges than himself, to be adequate to the task assigned it—viz., to see all the lodes at 20 fms. from the surface. I will confront with such a man as Sampson Vivian at any time, to prove that the fracture of the dam, and that only, prevented the machinery from keeping the water, as well as a steam-engine could do, down to the present 30; and I stoutly assert, that had it not been through the designing, unfair manner in which the mine was then stopped, instead of three months, three weeks would have found the dam repaired, and the mine at work again.

"Considerably swell, if not substantiate, the assertion of the mine agent to its fullest extent." Here S. V. certainly eats his own words, and must be understood to mean, that in saying the water machinery is 1000*l.* lost, in a great stretch, or, at least, one side of the truth. "Value of the dam, lost, &c., which then given at half price." Here S. V. must excuse me, if in my defence, I tell him, instead of stretching, he has actually told an untruth, as in my circular I never mentioned the word lost, and should think any one blindly ignorant who would expect any remuneration for an open cutting, when of no other use than to fill in when done with. "Art thou joking," &c. I am not joking, and appeal to any worker of timber, whether or not baulks 50 ft. long by 18 in. square laid down in water, merely bolted together, also Norway timber used as supports, may not, together with long timbers, be fairly estimated at half the prime cost, and then under, rather than overrated. "Cannot remove the impression from my mind." At this I am not surprised, as some minds are like hard stony ground, difficult to be impressed. "Thy statements of the real cost of the machinery fallacious." This reminds me of an obstinate boy, who would say No to everybody's Yes. S. V. says, that words are no proof; are his words to be taken as such in this charge? Has he, or can he, shew how my statements are fallacious? Every item of the six months' cost was read over and scrutinized by him and others at the meeting, when much time was occupied in taking notes to ascertain every cost of the repairs of dam, leat, &c. This being done, why did S. V. not bring other proof than words? I challenge him to produce and publish his notes, that the adventurers may see what he means, instead of making browbeating and reckless statements, without anything like a demonstration in support of the same. "Water compared with steam power." In my circular I merely showed that our wheel would prove our lodes nearly as deep as a 22-in. engine, advocated by S. V.,—or what I meant was, deep enough to see what the lodes are, which engine would cost about 1300*l.*, including buildings, &c., and at least 20*l.* per month to work the same; and then, as in the case of the wheel, if the lodes cut good, a larger engine would be required; and to put the 22-in. engine to work, stamps, &c., at a cost of 20*l.* per month, which our wheel will be equal to, would be a squandering of money, which we too often see practised in mines by men calling themselves mining agents, to the ruin of the speculation, and sometimes of the adventurers themselves. S. V. censures me for not more particularly describing the power of both the wheel and the 22-in. engine. Here the onus is on his part, and I ask, has he done so himself? or can he tell me the power of the wheel?—does he know the weight of water acting on its floats? I believe not. If he does, why not have shown his knowledge of the question, in order to refute my suppositions, and by figures have driven me from my position. "That my circular was intended to mislead rather than to enlighten the adventurers." This is something scurrilous, and I think every shareholder will consider it very unfair conduct, to use such language without an elucidation. If he is in a position to prove it, let him do so. 'He has his notes of the items of account, as before stated. If not proved, of course shareholders will not think the better of him for bringing an accusation, without proof to corroborate the same. "That the 22-in. steam-engine would effect a saving of half the cost of working it at the present depth." I defy S. V. to make out such a case; and will meet him with the same boldness he is pleased to assume, and state that I think nothing can be more deceptive than his picture thus drawn, or more unfair than his arguments used. Supposing, as he stated at the meeting (which I do not admit), that the 9½ fms. of shaft might be sunk even at the same cost, or, if he wishes it, less than with the wheel, owing to accidents of the dam, I shall not stop here, but take a prospective, as well as the then present cost of sinking; and instead of absurdly estimating the 9½ fms. at about 80*l.* per fm., as S. V. did at the meeting, to bear the whole outlay of machinery and repairs of dam at once, I shall look at the work the wheel has done up to this time, and what it is intended to do, and throw the whole of the outlay, repairs, &c., on all the work it may in time perform, and place this in the scale against the outlay and cost of working the 22-in. engine, and see at the sequel on the point of saving which would kick the beam. If steam-engines are not likely to be washed away, their cost often washes or drives away some adventurers, who are very forward to vote their erection, after which (like the ostrich which buries its egg in the sand, to be hatched by the sun) leave the purser to hatch the money to pay cost for them out of his own purse, until some six or nine months after, or when it may suit their convenience to pay, which time, in some cases, never comes.

"With steam we should have the satisfaction now denied us." This beats all the other of S. V.'s remarks, and must satisfy all adventurers, that his object is to misrepresent, rather than acknowledge the present effectual workings of our machinery and mine. For (mark!) on the power of the wheel being questioned at the meeting, Mr. Sims (the engineer) declared that it did its work better at the 30 fms. than at the first onset. Now, if friend Sampson had been such a scientific man as one would suppose him to be by what he assumes, surely he would then, as a man of war, have combatted this assertion of Mr. Sims, and questioned the efficiency of the wheel, as he now does; but not a word from friend Sampson on the subject. And what is most surprising, he then showed great confidence in the wheel, by moving himself that the shaft then at the 30 be continued sinking; that a cross-cut, both north and south, be driven to cut five east and west lodes and caunters; and that the water from the shaft, two levels, and from the six lodes, should all be kept by that machinery which he now calls miserable and inefficient. After such a proposition as this, and working to such an extent as we are, how can he tell the adventurers that their "hopes are blasted, and their property ruined?" However combative strong Sampson may feel disposed to be, I cannot allow him thus by wholesale to slay with a jaw-bone (not of an ass) all the hopes and future prospects of the South Maria adventurers, without standing in the way, and doing something to arrest his progress. However much it may increase his ire, I must accuse him of one of three things:—1st. That he showed confidence in the machinery, by his vote of the works; 2d, that if he thought the wheel inadequate to the work assigned, he acted the hypocrite in proposing a thing so deceptive; and, 3d, if he did dissemble, his object must have been to drown the mine; therefore, in either case, no adventurer can give him any credit for the position he has since taken.

"My advocacy." In conclusion, I state that originally I advocated steam-power—being, like many others, ignorant of the ruinous expenses attending the same. But having learnt from men of science and practical knowledge, that a great moving power, like the River Tamar, could be turned to some good account for working machinery, I became a convert to the system, and chose to think for myself. And why should I not exercise my mind, as well as S. V.? I have always been a large shareholder, and have sacrificed much time and money for the benefit of the concern; and while we have adventurers, men of long experience in mining affairs, who have a large interest at stake in South Maria, I shall certainly side with them, knowing that such will do every thing for the best, to promote their own and the company's interest; and which appears to me to be right, I shall advocate for the future, as well as the past, fearless and careless of any opposition from friend Sampson Vivian, which, at the most, to me will be like a figure 9 with the tail cut off.

The whole of the cost of South Maria, up to the last meeting, was 1925*l.*, or 1*l.* 18s. 6d. per share. With this sum we then had a shaft 30 fms. deep; all machinery, and repairs to dam, leat, &c., paid for; smiths' shop, powder-house, count-house, and office built; shaft timbered about 12 fms., and divided all the way down, horse-whim erected, about 500 fms. of costeaning on the backs of lodes, agents' salaries, and other expenses, the whole cost of which was then, say 1925*l.*; and for any man to say that the machinery and repairs is 1000*l.* out of this sum lost, is, I say again, taking an untenable position, and ought to be questioned. I hope to be in my place at the next meeting, to confront with any one on my statements of the cost of the machinery and the contents of my circular; and, supposing I shall trouble you again, in order to combat this man of peace, now engaged in war, this must suffice for my defence to his first attack, but shall hold myself ready for the next assault. I now inform the adventurers, that our so-called miserably inefficient machinery is at work, and with ease keeps the water at the 30, and the two cross-cuts, north and south. These cuts, as before stated, are intended to cut six lodes, two of which we hope soon to see; and while our water machinery does as well as it is now doing, friend Sampson may recommend steam power to another company, as the South Maria adventurers will not have it until they are compelled to do so.

*King-street, Tavistock, May* 25. JOHN SECCOMBE, Purser, South Maria.

TREVISKEY AND BARRIER.—Statement of accounts for Feb.: *Treviskey.*—By amount of ore sold, 28th Jan., 274*l.* 12s. 7d.—deduct 1-12th for lord's dues (22*l.* 12s. 8d.), 251*l.* 19s. 11.; received for materials charged Barrier, Feb. and March, 9*l.* 8s. 10d.; ditto, per James Phillips, 1*l.* 14s.—252*l.* 2s. 9d.—To labour cost, Feb. and March, 58*l.* 9s. 3d.; tribute of ores, 37*l.* 10s. 7d.; merchants' bills, &c., 25*l.* 19s. 2d.; Tresavean adventurers' engine cost, &c., 101*l.* 19s. 8d.=131*l.* 18s. 8d.; showing profit of 120*l.* 4s. 1d.—By balance in hand, end January, 38*l.* 14s. 5d.=124*l.* 18s. 6d.—deduct dividend of 10*l.* per 120th share, declared 17th May, 120*l.*; leaving now in hand, 4*l.* 18s. 6d. *Report.*—In Michael's shaft, sinking below the 236 fm. level, the lode is 5 ft. big, and worth 80*l.* per fm. In the 248 fm. level, driving east, 9 ft. east of Michael's shaft, the lode is 2 ft. big, producing good stones of ore, and, from its present appearance, likely to improve. The lode in the 236 fm. level, driving 12 fms. east of shaft, is 2½ ft. big, and worth 36*l.* per fm. The 212 fm. level is unproductive. The lode in the 200 fm. level is 2 ft. big, producing stones of ore, and has a promising appearance. The 188 and 176 fm. levels are still unproductive. We sampled last week 369 tons of ore, and expect to raise 350 tons for May and June.——*Barrier*—By amount of ore sold 28th Jan., 30*5l.* 16s. 9d.—deduct 1-14th for lord's dues (21*l.* 16s. 10d.), 283*l.* 19s. 11d.; all the adventurers' proportion of dividend, declared 23d March, 1*l.* 1s. 5d.—285*l.* 1s. 4d.—Deduct, to labour cost for Feb. and March, 42*l.* 0s. 2d.; tribute of ore, 60*l.* 2s. 2d.; merchants' bills, &c., 23*l.* 14s. 11d.; Tresavean adventurer's engine cost, 17*l.* 17s. 3d.=143*l.* 14s. 6d.—profits, 141*l.* 6s. 10d.; by balance in hand, end January, 62*l.* 6s. 2d.—203*l.* 13s. To dividend of 1*l.* 10s. per 120th share, declared 17th May, 180*l.*—In hand, and to be carried to the account at the end of May, 23*l.* 13s.—*Report*—We sampled in the Barrier last week 71 tons of ore, and from the tribute pitches we expect to raise 90 tons for May and June.—JOSEPH JENNINGS.

WHEAL MARY ANN.—At a general meeting of shareholders, held at the White Hart Inn, Liskeard, on the 19th inst., the accounts for Feb. and March, showing balance against the mine of 153*l.* 16s., were examined and passed. The following report, from Capt. Peter Clymo, jun., was read to the meeting:—There has been but little done in the 15 fm. level since the last report, the men having been employed in sinking a winze from the adit to this level for ventilation, which is now nearly holed. Barratt's shaft is sunk 13 fms. under the 15 fm. level, on the course of the lode, where it is 8 ft. wide, and worth from 16*l.* to 20*l.* per fm. The lode in the 30 fm. level, north and south of the above shaft, is from 2 to 8½ ft. wide, and worth 16*l.* per fm. We are stoping the lode north and south of the shaft, and calculate raising about 25 tons of ore per month. We intend to sample 50 tons of ore in about three weeks from this time. Our steam-engine was put to work on the 12th inst, and works very well; we shall now sink Pollard's shaft under the adit level with all possible speed; and, in conclusion, I beg to say, that in my opinion we shall have a good and lasting mine, by giving her a fair prosecution.

## LOSTWITHIEL CONSOLS MINING COMPANY.

A general meeting of adventurers was held, at the offices, King-street, Cheapside, on Tuesday, the 25th inst.

PETER DAVEY, Esq., in the chair.

After the usual preliminaries, a statament of accounts was presented, showing balance against the mine of 98*l.* 4s. 10d.—which was passed, subject to the balance-sheet being audited by Messrs. Addis and Koch, who were appointed general auditors to the mine. A call of 2*l.* per share was made, payable in 28 days, being the remainder of 5*l.* call, made 15th Dec.—A finance committee was chosen, consisting of Messrs. Davey, Offord, Addis, Jerdein, Ruston, and Smith. The committee to be remunerated in future by a payment of 2*l.* 2s., to be divided amongst those who attend the monthly meeting; and absentees to pay a fine of 5s. each, to go in diminution of the 2*l.* 2s. to be paid by the mine. The next general meeting was fixed for the 20th July next.—The following is the balance-sheet submitted:—

Dr. *Lostwithiel Consols Mine Balance-Sheet*—1846-47 (953 shares).

| | | | |
|---|---|---|---|
| Balance of old calls received from purser, as per last balance-sheet, of 15th Dec., 1846 | £28 | 10 | 11 |
| Call—1*l.* per share, due 11th January, 1847 | 953 | 0 | 0 |
| Ditto—2*l.* per share, due 19th April, 1847 | 906 | 0 | 0—787 10 11 |
| Cost-sheet for April, 1847, unpaid | £96 | 18 | 1 |
| Part cost of engine, unpaid | 337 | 10 | 0 |
| Committee's acceptance, due 31st August, 1847 | 337 | 10 | 0—771 18 1 |
| Total | | | £1559 9 0 |
| Cost | £1391 | 15 | 9 |
| Calls | 787 | 10 | 11—604 4 10 |
| £3 per share not yet called in by committee | | | 906 0 0 |

| Cr. Balance against the mine | £ | | |
|---|---|---|---|
| 1846—December cost-sheet | £74 | 6 | 2 |
| 1847—January ditto | 91 | 3 | 4 |
| February ditto | 88 | 3 | 7 |
| March ditto | 92 | 8 | 9 |
| April ditto | 96 | 18 | 1 |
| Captain J. B. Clymo, for visiting and reporting on the mine | 2 | 18 | 3 |
| Printing, stationery, postages, books, *Mining Journals*, lithographing plans and advertising—May, 1846, to April, 1847 | 22 | 15 | 7 |
| Use of offices—May to November, 1846 | 2 | 2 | 0 |
| Secretary's salary—December, 1846, to April, 1847 | 21 | 0 | 0 |
| Cost of 36-inch cylinder pumping-engine, as per contract with John Hodge | 900 | 0 | 0 |
| Cost to 30th April, 1847 | £1391 | 15 | 9 |
| Arrear on call, 2*l.* due 19th April, 1847 | £76 | 0 | 0 |
| Cash at banker's | 91 | 13 | 3—167 13 3 |
| Total | | | £1559 9 0 |

**The following is the report from Capt. John Offord read to the meeting:—**

*Lostwithiel Consols Mine, May* 24.—Summary of Operations since January 1, 1847:—The sinking of the shaft being suspended on account of the rise of water, a level was commenced into the south hill, to reduce the surface springs, and to explore the lodes in the vicinity of the shaft. The exploring adit enters at the point *a*, and is driven on the caunter lode *b b b*; the present end *b* is in 44 fms., and is nearly 10 fms. deep; in the course of this adit, we have cut the lodes *c c c*, *d d d*, *e e e*. The first a large strong lode, possessing fair mineral properties, and underlaying towards the shaft. The second, *d d d*, presents a very promising appearance, and produced stones of good quality; it is about 3 ft. wide, and underlaying as the former. The lode *e e e* is about 15 in. wide, composed of gossan, spar, with spots of mundic and ore—on this branch a rise has been made to surface for air. Shortly after passing the latter lode, a branch about 9 in. wide opened in the middle of the caunter, producing some rich gossan, and ore of superior quality. The gossan assayed (being an average sample), yielded 10½ per cent. of copper, and is worth nearly 8*l.* per ton, net. This branch continued several feet, and stones of a similar kind are still broken in the end, though not depcaited in so regular a form. Specimens of both are forwarded (the latter tied round to distinguish them). It may be desirable to continue this level, in order to prove the lodes still a-head, and to obtain the experience necessary rightly to direct our operations in connection with a deeper cross-cut. The caunter *b b b*, will be of great advantage to the mine, as a cross-cut driven thereon may pay its own way, besides enriching the lodes which intersect it. The boiler was delivered on the mine last week safe and sound, and the engine is being erected with all speed, and will be completed very little after the suggested time (1st of June); we propose, then, to carry down the shaft as rapidly as possible to the 30 fm. level, and, should the ground remain pretty much as at present, about five months will accomplish it; we shall then cross-cut to the William lode (No. 4), and explore it east and west at that depth, and continue the cross-cut on the caunter lode, to examine all the lodes intersected above. At this depth we presume that very decided indications of the value of the mine will be developed.

## EAST COOMBE MINING COMPANY.

A special general meeting of adventurers in this mine, was held at the 'count-house, on the mine, on Tuesday, the 25th inst.,

THOMAS HODGE, Esq., in the chair.

The circular convening the meeting having been read by the purser,

The CHAIRMAN proposed to read the minutes of the preceding meeting, held on the 19th inst.

Mr. ENGLISH had to offer an objection to the course intended to be pursued—inasmuch that he considered the two meetings, which had been previously held, were informal and irregular. A motion having been made, that the minutes of the meetings, held on the 5th and 19th, be read, that gentleman moved an amendment, which was negatived; and the minutes having accordingly been read, the meeting proceeded to the business, for which it had been specially convened.

A PROPRIETOR called upon the purser to render a statement of the accounts, in accordance with the notice convening the meeting—on which the cash account of Mr. George Chowen, the purser, with the adventurers, showing a balance due him of upwards of 200*l.*, was laid before the chairman; as it was necessary, however, to refer to the vouchers, and other documents, it was agreed that the same be referred to the committee.

A lengthened discussion ensued on the present position of the company, and the renewal of the lease—in the course of which, in consequence of a question put to the purser, as to the report proposed to be submitted on the subject,

Mr. ENGLISH begged to state, that, since his arrival, he had been given to understand by Mr. Westacott, one of the lessors, that he had entered into an agreement with Messrs. Pengelly, Finch, and Hodge, whereby he had undertaken to renew the lease at the expiration of the present term, for a further period of 21 years. He (Mr. E.) considered, that the report upon this particular point would be made by the chairman.

The CHAIRMAN, on being appealed to, stated, that he considered the agreement entered into with Mr. Westacott by himself, and the two gentlemen named, was a private transaction, and not on account of the company.

Mr. ENGLISH would, under such circumstances, and with an explanation which surprised him, then ask Mr. Westacott, whether the grant made to the three individuals named, was to be considered to them in their private capacity, or as trustees for the company?—in fact, whether it was not to them and their co-adventurers?

Mr. WESTACOTT, in reply, stated that the grant made was to those gentlemen, distinct from the company; and some acrimonious observations followed, in which more than one adventurer took part—it being, however, understood by a majority of the meeting, that the gentlemen possessing the grant did not wish to deprive their co-adventurers of an interest therein; but deemed the course adopted by them as essentially necessary for the protection of their respective interests.

Mr. FINCH (one of the committee) having devoted much time to the inspection and revision of the accounts, laid before the meeting four sheets of accounts, showing the debts or liabilities of the company up to the present time; from which it appeared, that the amount necessary for liquidating the same was 1800*l.*, or thereabouts; it was, however, right to observe, that castings, and other materials, not required on the mine, would, as he was informed, produce some 200*l.* or 300*l.*, which would thus reduce the amount.

Mr. PENGELLY considered that the meeting was consuming much time in matter of detail, which might be well disposed of by the committee; and that they were losing sight of the main object, that of increasing the capital of the company, which he presumed was the primary object in view. He presumed that Mr. English, or Mr. Chowen, had some proposition to submit.

Mr. ENGLISH begged to state that the purser, in calling the meeting, had done so for the purpose of taking the opinions of the adventurers; he (the purser) held four-fifths of the mine, and was ready to concur with the other adventurers in any course which might be deemed expedient—at the same time, that neither the purser, nor he (Mr. E.), had any proposition to place before the meeting.

A further lengthened discussion followed, which resolved itself into a determination to increase the number of shares from 512 to 2048, on which 30s. per share should be paid, as conveyed in our advertising columns.

Mr. ROWE wished to be informed, before such resolution was, however, put from the chair, whether he was to understand that these three gentlemen, to whom Mr. Westacott had granted a renewal of the lease, considered themselves in the position of trustees for the adventurers, or as independent of the company?—The CHAIRMAN, with Messrs. Pengelly and Finch, having retired to consult as to the answer to be given on their return, stated, that their only object was the protection of the rights and interests of the company at large; and that, upon the measure being carried out of increasing the capital of the company, they would most readily surrender any rights they might be considered to possess.—This announcement being considered satisfactory, a question was put to Mr. G. Chowen, as to a promise made him, with reference to the adjoining ground, which it was considered highly desirable to acquire as an extension of the sett.—Mr. G. CHOWEN had only to observe, that he had the promise of the sett; and that he should most cheerfully annex it to the present, so that the adventurers generally might benefit thereby; and further, in reply to a question from the CHAIRMAN, he expressed his readiness to forego a certain interest possessed by him in the mine to the extent of nearly one-fourth so that they might work together.—A vote of thanks having been passed to the chairman, the meeting separated.

## WHEAL CONCORD MINING COMPANY.

An adjourned special general meeting of the adventurers was held at the offices, King-street, Cheapside, on Thursday last, pursuant to adjournment.

HENRY ENGLISH, Esq., in the chair.

The circular convening the meeting, and the minutes of the preceding meeting, having been read by the purser, the CHAIRMAN proceeded at once to direct the attention of the meeting to the objects for which it had assembled, being to receive a report as to the number of new shares constituted at the last meeting, taken by the present adventurers, and to determine as to the course to be pursued with reference to the disposal of any residue: he requested the secretary to report the result of the applications made to the several shareholders, and it would be for the meeting to determine on the course to be pursued.

Mr. CROFTS (as secretary) had only to state, that the response to the application made had been met only by one individual, although, he believed, and, indeed, was assured, that many awaited the result of the present meeting, as to the course they should adopt.

The CHAIRMAN observed, that the meeting was convened for the purpose of determining on the issue of the new shares to the public, in accordance with the resolutions passed at the last meeting. It appeared, from the report of the secretary, that few (or, indeed, he might say, no) shares had been taken up, and hence it was for the consideration of the adventurers what was really to be done. He (the chairman) was given to understand, that the new shares would be readily taken up by the purser on behalf of friends, and, perhaps, that gentleman would convey to the meeting his intentions, or correct him if in error.

Mr. W. SNELL was ready at once to offer to take the whole 1024 shares, at the terms proposed—that of 30s. per share—it being understood that all arrears of calls were previously paid up; but he could not recommend to his friends, nor would they, indeed, adopt the shares, without they came in on fair and equitable terms—every person paying up his instalments: if such were done, he had no hesitation in expressing his conviction, although he would not be bound, that the shares would be taken up, and the mine actively prosecuted. It would be, however, a *sine qua non*, that the management of the affairs of the company be removed from the present offices, and his friends had suggested the British Mining Offices, 41, Moorgate-street; as also the appointment of a new secretary, and other officers. He was happy to say, that Mr. Crofts, the present secretary, so far from offering any objection to such course, had readily acceded to it, and hence no difficulty existed on that point. He was satisfied, these matters being settled, that the money would be forthcoming, and the mine worked with spirit and advantage to the adventurers.

Mr. CROSSTHWAITE considered, that the present company should not take upon themselves any guarantee as to the arrears; but if new adventurers be admitted on the proposed terms, that they should come in *pari passu*. The machinery was worth many hundreds of pounds—to say nothing of the lease—and that if the present company, or those new adventurers with whom they might be associated, took active measures, no doubt the arrears of calls might, and would, be recovered; indeed, he believed many, or most, of them were ready to pay their calls, but they wished to see something done, either to work the mine, or abandon it.

Mr. DAVEY was desirous of drawing the attention of the meeting to the real object in view, and was proceeding to propose a resolution, when he was interrupted by Mr. BEARD, who stated, that representing several shareholders, he wished to ask a question of the chairman, as to the proceedings at the mine. He had been given to understand, on good authority, that the mine had been imperfectly worked—that the underground workings had not been prosecuted with that spirit, or with that mining knowledge, which they ought to have expected, and he called upon the purser, who, he understood, was present, to afford an explanation.—The CHAIRMAN at once referred to the secretary and to Capt. J. B. Clymo, who were present, and who would, doubtless, afford every information on the point; while he begged to direct that gentleman's attention to a section, which had been carefully made, showing not only the old workings, but the ground cleared by the adventurers, and the new ground opened. The section, having been submitted to the meeting, and explained by Capt. Clymo, Mr. BEARD expressed himself as perfectly satisfied that the representations made to him were unfounded

Mr. DAVEY at once proposed a resolution to the effect, that the new shares, not having been taken up, or adopted, by the adventurers in the mine, that such be put in the hands of the purser, with instructions, or authority, to dispose of the same, which was carried unanimously.

Mr. BEARD wished to know the present position of the company; but as no accounts had been made up with accuracy, not assuming that they would be required at the meeting, the following summary, of course with "errors excepted," was put forward:—Amount owing by the mine, including the present month's cost, 1777*l.* 5s. 6d.; less amount of arrears of calls, 1266*l.*; from which, however, was to be deducted 400*l.*, as sums which might not be recovered; hence, the deduction being made, would leave the mine in debt 911*l.* 5s. 6d. From this it would appear, that assuming 1024 shares issued, at 30s. per share, there would remain, after payment of all liabilities, 624*l.* 14s. 6d. towards prosecuting the mine; while the value of the materials, which had cost 1800*l.* to 2000*l.*, might be assumed at—say 50 per cent. reduction—1000*l.*; or, making 1624*l.* 14s. 6d., exclusive of the sett, to which much value was attached.

Mr. CROFTS wished to draw the attention of the chairman to the absence of the accounts being vouched by the auditors, and read a letter from the clerk on the mine, stating his readiness to transmit the same, on receiving authority from the purser.—A short discussion ensued; and a resolution having passed, it was understood that the purser would see they were forthcoming.

Capt. CLYMO begged to state, that while anxious to advance the interests of the company, and with a full confidence that, by the judicious application of capital, beneficial results would be attendant, regretted in one sense that he should retire from their service—they having always acted most honourably towards him—and whom he begged to thank for the kindness manifested, and the confidence reposed. He, however, having an opportunity of advancing himself by taking another position than that which he had occupied, and residing in London, would not henceforth be able to attend to the affairs of the company. He should be happy, until another agent was appointed, to carry out all measures, and, at all times, to afford to the company his best services.

Mr. DAVEY considered that Capt. Clymo had ever done his duty; that no complaint could be made; while it was naturally his (Capt. Clymo's) object to advance himself in life, and he congratulated him upon the opportunity afforded him of so doing: he regretted that the company lost his services, while he felt assured that the meeting would join with him, in conveying to Capt. Clymo an expression of satisfaction of the services rendered; and a resolution to such effect having been moved, was carried accordingly.—A vote of thanks having been passed to the chairman, the meeting dissolved.

BARRISTOWN.—The monthly meeting of shareholders was held, on Monday last, in Birchin-lane,—Mr. CAMBON in the chair. The following were the accounts presented:—Balance in favour of mine last month, 87*l.* 9s. 11d.; lead ores sold 28th April, 771*l.* 16s.=859*l.* 5s. 11d.—less, April cost, 540*l.* 17s. 2d.; balance in favour of mine, after paying April cost, 318*l.* 8s. 9d.—Against the cost of the present month, 35 tons of ore have been shipped. A discussion took place as to the propriety of paying a small dividend, and it was decided to let the matter stand till the next monthly meeting, when it was thought the mine would be in a position to pay 500*l.*

WHEAL TREVENNA.—A meeting of adventurers was held at the mine on the 21st inst., when the purser's accounts from Dec., 1846, to April, 1847, were allowed and passed; and from the recommendation contained in the subjoined agent's report, a call of 1*l.* per share was made for the further prosecution of the mine. The following report from Capt. S. Bennetta was read to the meeting:—Since the last meeting of adventurers, the cross-cut north from the south lode has been extended about 20 fms., in which several metallic veins, varying from 1 to 4 in. in width have been intersected, and chiefly composed of mundic and pench, together with soft spar, and some spots of black and yellow ores; but from the character of the middle lode in the shaft (which, by driving the cross-cut, we wished to see at the depth of 20 fms. from the surface), and on which we sunk a few fathoms—together with its bearings in the costean pits, I infer that we have not as yet intersected it: the killas in the cross-cut has been extremely favourable; the last stent of 5 fms. was set at the very low price of 21s. per fathom, but the end at present is somewhat harder. I would again strongly urge upon you the importance of further exploring the Wheal Bank lode with all possible speed. Our engine-shaft on that lode is now 20 fms. below the adit level, in the bottom of which the lode is about 3 ft. wide, chiefly composed of spar, peach, with good stones of copper ore, mundic, and blende. By reference to my former reports, you will find that the adit level has been extended on the course of that lode about 140 fms.; in the course of driving which level, we had at different times very promising indications of copper, so much so, that in one instance it prevented "tribute ground:" the average size of the lode being about 3 ft. wide. The shaft at present may be sunk for about 8*l.* per fm., and a level may be extended on the course of the lode for about 2*l.* per fm. We have already on the mine, all the machinery which is immediately necessary for the prosecution thereof, except about five 7-inch pumps. The cost of "forking" the water, fixing the pumps, and other necessary items, would be about 25*l.*; and when completed, we should at once be in a position either to sink or drive, which may be thought most proper; but the former I would strongly recommend 10 or 15 fms. farther at least, when, by extending the levels at that depth, I have but little doubt that you will be amply remunerated for the comparatively small outlay which is necessary to give that lode a sufficient trial.—Capt. J. Osborne, who had been desired to inspect the mine, fully corroborated the above report.

GOLD MINES OF RUSSIA.—A report has been published at St. Petersburgh of the produce of the gold mines in the Ural Mountains, which were discovered in 1819. They have proved to be much richer than was at first expected—thanks to a new system of working them, and have become the source of a very fine revenue to the imperial treasury. Last year they rendered 68,880 lbs. of gold. The mines contain also a quantity of small particles of gold washed down with the sand from these mountains, from which, together with that of Siberia, the State has, since 1819, derived no less than 717,000,000 frs.

LOCOMOTIVE POWER.—Mr. Brunel, in his evidence before the committee of the House of Commons, on the Cheltenham and Oxford line, said:—"No difficulty was to be apprehended from the incline of 1 in 60, as there was an incline of 1 in 60, and 1 in 75, on the present Cheltenham line, between Swindon and Stroud, on which they were constantly working; but in order to ascertain the real facts of the case, he had several trains running constantly up this incline, and the results of the experiments were, that with one of their large eight-wheeled engines, they carried up trains of 50, 60, and 70 tons each, at a rate of from 25 to 35 miles an hour—70 tons were about equal to a train of 14 carriages on the narrow guage line. With a common goods train engine, they had taken up 140 tons, and 110, at 25 miles an hour, which was faster than the usual speed."

IMPROVEMENTS IN LOCOMOTIVES.—There is at present on view in this town, the model of an invention for preventing locomotive engines from running off the rails, under almost every conceivable state of danger to which such engines are ever likely to be subjected. We have seen the model at work—seen it subjected to the severest tests—and it certainly seems almost impossible for an engine so constructed to get off the line. The author of this ingenious improvement on the locomotive is an American gentleman; and he has also invented a contrivance for preventing to a great extent the oscillation of trains.—*Manchester Express.*

IMMENSE BEAM FOR A STEAM-ENGINE.—A large concourse of persons were drawn together on Monday morning last, near the cattle market, to view a ponderous beam, placed on a suitable four-wheeled carriage, with wheels, almost equal to the caravan which conveys Wombwell's elephants. On inquiring, we found that it had been cast for the engine at the lead mine of Lathkill Dale, near Bakewell, Derbyshire. It was cast at the Milton Iron-Works, and weighed with the waggon 24 tons! It was drawn by 24 horses, and 10 men were in charge of them, and another waggon behind, of smaller dimensions, drawn by five horses. The latter vehicle contained all the necessary ropes and tackling for safe delivery; and above them a sufficiency of hay and corn for the horses on their journey. We hope it will have a safe delivery.—*Sheffield Iris.*

VULCANIZED INDIA-RUBBER.—We were present at the Society of Arts, on Wednesday evening, when a most interesting communication was made by Mr. W. Brockedon, on the new treatment of India-rubber, in the process termed "vulcanizing," or "sulphurisation," and in that of "conversion." The results of these extraordinary operations have been seen in an almost endless variety of uses, to which the numerous and invaluable qualities of the substances produced have rendered them applicable. The process itself consists in exposing a quantity of India-rubber, sufficiently large to prevent dissipation, to the action of sulphur (in proportion of one-tenth sulphur, and nine-tenths India-rubber), both being raised to a high temperature. An absorption of the sulphur takes place by the elastic matter, and produces a new substance—the chief properties of which are great elasticity, a freedom of expansive or contractile motion, uninfluenced by extreme temperature of the atmosphere, and its being insoluble in any fluid or gaseous substance, with which it has been tried, for the purpose of producing a varnish for joining. The materials produced bear different names, according to the particular class of tree from which the elastic matter employed in its formation was yielded. Of these there are a great variety; and, although many properties of the one are common to all, they are all of them found to differ more or less in the degree of heat or cold requisite to produce laxity or rigidity, which is generally extreme in all. Mr. Brockedon gave an account of numberless useful purposes to which this substance has been applied with a success that could hardly have been anticipated. On these were exhibited several illustrations, such as wheel tires, screws (in which the male and female portions are prevented from joining by being brushed over with the powdered silicate of magnesia), door-hinges, springs for locks, buffers for railways, inkstands, electric telegraph wire-shields, dry gas-meters, elastic bandages, the epithema, portions of ladies' clothes, safety ropes and tow lines, air-bags for life-boats, and a great many more of a most interesting character, including a portion of the page of a book, equal to the most perfect stereotype; the substance is also now applied in the form of a solid band or rope, as a tire to wheels, which, as a ring smaller than the periphery, is stretched and sprung on—thus retaining its place, and possessing great endurance against wear and tear; it offers a sensible elasticity to the carriage, and gives ease and comfort to the traveller. It is being applied as tires even to the driving-wheels of locomotive engines, with the expectation of success; for its grip on the rail will give all the power of the engine to its propulsion—while its use for washers, buffer and drag springs, felt for placing between the rails and chairs, or sleepers, is considerable. Owing to its properties of being permanently elastic and indestructible, it has become one of the most valuable adjuncts of the mechanism of the engineer. The articles exhibited excited a great deal of astonishment, many of the applications being entirely new, and appeared to make a sensible impression upon the meeting, of the vast amount of ingenuity and labour which must have been employed upon this substance, in order to bring the manufacture to its present advanced state.


IMPORTANT TO RAILWAY COMPANIES.

**PATENT KAMPTULICON COMPANY, 18, CORNHILL.**

This company having completed their new factory, are prepared to supply railway managers and contractors with an elastic material (perfectly non-absorbent) to place between the rails and sleepers, and between the frames and bodies of carriages, to prevent jarring, and, consequently, wear and tear. The elastic planking is strongly recommended to be used for the backs and sides of carriages, to prevent splinters when accidents occur.

By order of the board, P. G. GREVILLE, Secretary. 42

**OFFICE FOR PATENTS, 7, STAPLE INN, HOLBORN.**

J. MURDOCH (successor and late assistant to Mr. Hebert)

Informs INVENTORS and PATENTEES, that, at his OFFICE, they can obtain REFERENCE TO A CLASSIFIED LIST OF PATENTS, (THE ONLY ONE EXTANT), which shows at one view all the Patents ever granted for any particular object, whereby they may save much trouble and expense, and procure information not otherwise obtainable. BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED. 43

SPECIFICATIONS carefully prepared, and REPORTS of ENROLLED SPECIFICATIONS furnished on moderate terms.

FINISHED and WORKING DRAWINGS executed with accuracy and dispatch.

**NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY,**

26, *CORNHILL, LONDON.*

Capital £300,000.—Empowered by Act of Parliament. 44

This institution embraces important and substantial advantages with respect to Life Assurances and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessity.

Assurances for terms of years are granted on the lowest possible rates.

DIVISION OF PROFITS.

The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 35 to 85 per cent. on the premiums paid on each policy effected on the profit scale.

EXAMPLES.

| Age. | Sum. | Prem. | Year. | Bonus added. | Bonus in Cash. | Permanent reduction of Premium. | Assured may Borrow. |
|---|---|---|---|---|---|---|---|
| 60 | £1000 | £9 3 4 | 1837 | £217 15 1 | £109 0 11 | £16 0 4 | £445 0 0 |
| | | | 1838 | 192 3 0 | 87 1 4 | 13 10 2 | 395 11 1 |
| | | | 1839 | 165 11 10 | 74 1 9 | 11 3 1 | 346 2 3 |
| | | | 1840 | 116 7 6 | 54 0 10 | 7 18 10 | 296 13 4 |
| | | | 1841 | 111 6 8 | 49 10 0 | 7 10 4 | 247 4 5 |

The division of profits is annual, and the next will be made in December of the present year.

F. FERGUSON CAMROUX, Secretary.

UNDER ROYAL PATRONAGE.

**KEATING'S COUGH LOZENGES** are indispensably necessary, both for the Cure and Prevention of Coughs, Asthmatic, and all Pulmonary Complaints, during this changeable weather. 45

CURE OF COUGH OF EIGHT YEARS' STANDING, ACCOMPANIED WITH SHORTNESS OF BREATH!

Birkenhead, near Liverpool, Jan. 8, 1847.

SIR,—I have been afflicted with a severe cough and shortness of breath for nearly eight years, and after trying various remedies, did not find myself any better. I purchased a small box of KEATING'S LOZENGES of you, from which I found great benefit. The second box, 2s. 9d. size, completely cured me, and I can now breathe more freely, and am as free from cough as ever I was in my life. Hoping that others, similarly afflicted, will avail themselves of so certain and safe a remedy,

I remain, Sir, yours faithfully, WILLIAM ANDERSON.

To Mr. Geo. H. Howell, chemist, 72, Dale-street, Liverpool.

Prepared and sold, in boxes at 1s. 1½d.; tins 2s. 9d., 4s. 6d., and 10s. 6d. each, by THOMAS KEATING, chemist, &c., No. 79, St. Paul's Churchyard, London.

N.B.—The safety attendant on the use of these Lozenges, together with their agreeable flavour, has given them a well-merited popularity.

**SIR JAMES MURRAY'S FLUID MAGNESIA.**—Prepared under the immediate care of the inventor, and established for upwards of 30 years by the profession, for removing BILE, ACIDITIES, and INDIGESTION—restoring APPETITE, preserving a moderate state of the bowels, and dissolving uric acid in GRAVEL and GOUT; also as an easy remedy for SEA SICKNESS, and for the febrile affection incident to childhood it is invaluable.—On the value of magnesia, as a remedial agent, it is unnecessary to enlarge; but the fluid preparation of Sir James Murray is now the most valued by the profession, as it entirely avoids the possibility of those dangerous concretions usually resulting from the use of the article in powder, and in the over-dosed liquids of detected imitators.—Sold by the sole consignee, Mr. Bailey, of North-street, Wolverhampton; and by all wholesale and retail druggists and medicine agents throughout the British empire, in bottles, 1s., 2s. 6d., 3s. 6d., 5s. 6d., 11s., and 21s. each. 46

The Acidulated Syrup, in bottles, 2s. each.

N.B.—Be sure to ask for "Sir James Murray's Preparation," and to see that his name is stamped on each label, *in green ink*, as follows:—"James Murray, Physician to the Lord Lieutenant."

A REMARKABLE CURE OF DROPSY BY HOLLOWAY'S PILLS.—J. Thomas, an old discharged soldier, who had been many years in India, where his constitution was much impared, attended St. George's Hospital some time since, being in very bad health, besides being dropsical. After several weeks the poor fellow began to despair, as he got worse instead of better. One day he happened to meet his old commanding-officer, who gave him some money, and recommended him to try Holloway's pills, which advice he followed, and in about two months every symptom of dropsy had left him, besides being restored to perfect health—this is another extraordinary proof of the virtues of this purifying medicine. Sold by all druggists; and at Professor Holloway's establishment, 244, Strand, London. 47

## SILVER AND GOLD MINES OF THE NEW WORLD.—No. XII.

X. THE UNITED STATES—*(continued)*

The mines—at all events, the silver mines—of Chili yielded little under the domination of the Spaniards. M. de Humboldt placed the production at the commencement of the century at 6827 kilogrammes of silver, and 2807 kilogrammes of gold. At present the extraction of gold, in counting only what is officially reported, has diminished two-thirds; but that of silver has increased five-fold. According to the statements annexed to the annual reports of the Minister of the Interior of the Republic, the declared produce averaged, during the last 10 years, 30,538 kilogrammes of silver, and 892 kilogrammes of gold. The smuggling appears to be inconsiderable;* M. Domeyko calculated it for silver at 25 in 1000 only, and with what is used to fabricate articles in the country at 75 in 778, or a tenth. In gold, after what we have already said, it must be greater—we will put it down at a fifth; and this will make the annual production 33,592 kilogrammes of silver, and 1071 kilogrammes of gold.

Thus the extraction of gold in Chili remains much less than it formerly was. This is owing to the working of the silver mines having become more profitable, and to the first of the precious metals having been abandoned for the second. The copper mines in this respect have exercised an influence at least equal to that of the silver mines. Whatever may be the newly-acquired importance of the silver mines of Chili, I cannot refrain from quoting here a comparison that I find in a notice of M. Duflot de Mofras, on the Republic of Chili. Copper, of which it is true that Chili possesses admirable and unique mines, gives a gross produce greater than that of the gold and silver mines united. In the interval of three years (from 1st January, 1840, to 31st December, 1842), during which the mines of precious metals yielded a great deal, they gave a value of 32,588,000 fr., which, on account of smuggling, may be carried up to 37,000,000 fr. or 38,000,000 fr. In the same period there were exported 11,626,592 kilos. of metallic copper, and 41,631,472 kilogrammes of ore, of the value together of 44,000,000 fr. The progress of the extraction of copper since the Independence has become still greater than that of the production of silver; and the copper mines are for the country a source of greater wealth than all those of the precious metals. The example of Chili shows also what may be expected from the other *ci-devant* colonies of Spanish America, if the authorities show the same intelligence and zeal for the public interests as have been manifested by the Chilian Government; and if the populations, having the veritable sentiment of the independence they have conquered, profit thereby for the extension of their conquests over fecund Nature, which offers them her treasures in return for their labour.

The production of Chili may be estimated, to 1810, at 300,000 kilogrammes of silver, and 217,000 kilogrammes of gold. From 1810, to this day, it may be put down at 672,991 kilogrammes of silver, and at 31,020 kilogrammes of gold. This makes, since the commencement, a total of 973,000 kilogrammes of silver, and 248,000 kilogrammes of gold, representing together, according to the tariff of French money, 1,070,000,000 fr., of which 216,000,000 fr. in silver, and 854,000,000 fr. in gold.

To show, by a new example, the instability of the industry of mines of precious metals, in the countries in which it has developed itself and flourished, I will cite an extract from a paper of M. Domeyko:—"The discovery of the mines of Chanarcillo dates only from 1831. A poor mountaineer, named Godoy, being engaged in hunting guanacos, reposed himself in the shade of an enormous block of rock, which rose from the indication of the vein of La Descubridora. Struck by the colour, and a certain metallic aspect of the most striking part of the rock, he began to scrape it with his knife; and, seeing that it was cut as easily as cheese (to employ his own expression), he carried a piece of this rock to Copiapo, where it was recognised for *plata plomo*—that is, for *argent corné* (chlorure of silver). He offered the half of his mine, which since that time has borne the name of *La Descubridora*, to Don Miguel Gallo, one of the oldest miners of the province, to whom Fortune had never been favourable in his youth. According to the arrangement that took place, Gallo was to supply the money necessary for the working, and the profit was to be divided between him and Godoy. Chance willed it that they should fall on the richest part of the vein, and they commenced in the very first days of the working to extract considerable amounts; but Godoy, like all those who discover mines, had not patience to wait. Seduced by the hope to discover better, he sold the half of the mine that belonged to him for 14,000 piastres; squandered his money, and died poor. The news of this discovery soon drew to Chanarcillo a crowd of miners. The first, to whom chance showed itself as favourable as to Godoy, were two brothers, named Peralta-Bolados, proprietors of a little *rancho* (hut) in the valley of Copiapo, and of a troop of asses, with which they conveyed to the town, or to the furnaces, and thereby supplied their wants. The two brothers found a famous block (*bolon*) of 70 to 80 quintals of ore, excessively rich. The extraction, conveyance, and treatment of this mass of ore, were so simple and easy, that these poor fellows, although without any of the necessary knowledge, and without any capital, succeeded in extracting in two years upwards of 700,000 piastres in silver. Puffed up with their prosperity, they thought only of enjoying it; and whilst they dissipated their wealth at Copiapo, which at that period was only a poor and badly-peopled village, their mine became all at once exhausted; and some months later these same Peralta-Bolados were seen poorer than they were before their discovery, having even lost their asses, of which they believed they would have no further need."†

The vicissitudes of fortune of the Peralta-Bolados, and of the mountaineer Godoy, are only the repetition, on a smaller scale, and with a final result less consoling, of the alternations of prosperity and distress of the famous Mexican miner Laborde, of whom we have spoken.

We have now passed in review all the countries of America that are considered producers of the precious metals. Gold and silver are, however, to be found in other parts of the New World. It is difficult to believe, that the vast territories of Venezuela, and even of the Equator, are absolutely sterile. We are ignorant, too, of what passes in the interior of Paraguay. The states that compose Central America certainly yield gold and silver. The Mint of Guatemala struck in each of the years 1820 and 1821 a quantity of silver corresponding to 9046 kilogrammes of fine metal, without counting a little gold. In 1842, the gold struck at this same Mint amounted to 106 kilogrammes of pure metal. Mr. M'Culloch attributes to the present Republic of Buenos Ayres a certain production in silver. We exaggerate nothing, in counting for the mines that we have not successively examined, an annual quantity of 20,000 kilogrammes of silver, and 500 kilogrammes of gold.

* The duty levied by the Government is only 9 per 100.

† On the *Constitution Geologique de Chili—Annales des Mines*, 4th series, vol. ix., p. 453

*[To be concluded in next week's Mining Journal.]*

## NEW PATENTS.

R. J. Blewitt, Esq., Llantarman Abbey, Newport, for improvements in the manufacture of malleable iron.

G. B. Thorneycroft, Wolverhampton, ironmaster, for improvements in the manufacture of rails for railroads.

W. B. Adams, Old Ford, Middlesex, engineer and carriage builder, and R. Richardson, late of Manningtree, Essex, but now of Hadleigh, Suffolk, civil engineer, for certain improvements in the construction of railways, and of engines and carriages used thereon; and also in transport and storage arrangements for the conveyance, management, and preservation of perishable articles.

C. Chimnock, gent., Regent's Quadrant, for improvements in regulating motion and controlling friction in the joints and other parts of furniture, machinery, and carriages.

W. E. Newton, Chancery-lane, civil engineer, for a new or improved instrument or apparatus for making or manufacturing capsules for enclosing medicinal preparations, or other liquid or solid substances.

J. M. Fourmentin, gent., New Bridge-street, Blackfriars, for improvements in the manufacture of carbonate of lead.

S. Smith, Nottingham, engineer, for a certain improved apparatus for determining the pressure of steam in boilers, and regulating the dampers in a furnace.

J. Aitken, Russell-street, Bermondsey, leather dresser, for improvements in steam-engines, or atmospheric engines, in distilling and in pumping water.

A. Allan, Crew, in the county of Chester, engineer, for certain improvements in turntables, to be employed on, or in connection with railways, part or parts of which said improvements are also applicable to the construction of tubular boilers.

C. Schiel, late of Frankfort-on-the-Maine, but now of Manchester, mechanician, for certain improvements in machinery, or apparatus for condensing steam, which said improvements are also applicable to other similar purposes.

M. Pool, gent., London, for improvements in the constructing of pneumatic springs and presses. (Being a communication).—*Mechanics' Magazine.*

NEW LINE TO BIRMINGHAM.—The widening of the Birmingham line from London to Tring will give a second line to Birmingham, by way of the Bletchley and Banbury, Oxford and Rugby, and Oxford and Birmingham lines, without interruption of gauge. It is impossible for Parliament to remove the narrow gauge off these new lines, though they may mix the gauges.—*Railway Record.*

RAILWAYS IN IRELAND.—In the House of Commons, last night, Lord George Bentinck presented petitions from Dublin, and from various unions in Clare, Queen's County, Galway, Clonmel, and other places in Ireland, in favour of the extension of railways in that country.—*Railway Record.*


GEORGIA TIN MINES, divided into 2048 shares, and worked *ON THE COST-BOOK SYSTEM.*

The necessary arrangements having been made for carrying out the operations of the company, all future communications are requested to be addressed to the offices of the company, 21, THROGMORTON-STREET, LONDON, where the specimens and plans, with the correspondence, may be seen.


WEST SHEPHERDS MINE.—The leader of lead in our bottom end is improved since last reported; it is from 4 to 7 in. wide, and more kindly than ever for continuing and increasing; the pitch is not much altered since last week.—D. SKEWES; T. HOOPER: May 26.

PERRAN WHEAL VIRGIN.—A meeting of adventurers was held at the mine on Monday last, when the accounts, of which the following is an abstract, were passed, and the balance carried to the debit of the next account. A quantity of ore has, however, been sampled, and sold for about 700*l.*, but not yet been paid for, otherwise the balance would have been 450*l.* in favour of the adventurers. The prospects, we are informed, are still very encouraging.—To balance at last account, 188*l.* 17s. 8½d.; cost and merchants' bills from August, 1846, to April, 1847, both inclusive, 1712*l.* 17s. 2½d.=1901*l.* 14s. 11d.—By call of 5*l.* per share, 640*l.*: ores sold (less discount), 1017*l.* 9s. 8d.=1657*l.* 9s. 8d.: balance, 244*l.* 5s. 3d.

TREVAN WOOD.—A meeting of adventurers was held at Grampound, on Monday last, when the cost for April, showing a balance of 5*l.* 5s. in favour of the adventurers was allowed; and a small call was made for the further working of the mine.

TRESAVEAN.—A meeting of adventurers was held on the mine, on Tuesday last, when the following accounts were passed, and a dividend of 7*l.* 10s. per share declared:—By balance on 28th of Feb., 780*l.* 6s. 8d.; ores sold (less dues), 4201*l.* 3s. 9d.; sundry credits, 183*l.* 1s. 6d. = 5164*l.* 11s. 11d.—To costs and merchants' bills for March and April, 3570*l.* 4s.; dividend of 7*l.* 10s. per share, 720*l.* = 4290*l.* 4s.—Balance in hand, 874*l.* 7s. 11d.

TRETHELLAN.—The usual two-monthly meeting of adventurers took place at Tresavean account-house, on Tuesday last, when the accounts, as follows, were seen and allowed:—By balance at last account, 304*l.* 1s. 3d.; ores sold (less dues), 725*l.* 18s. 5d. = 1029*l.* 19s. 8d.—To costs and merchants' bills for March and April, 471*l.* 10s.: balance in favour of adventurers, 558*l.* 9s. 8d.

WHEAL BASSET.—A meeting of adventurers took place on Wednesday last at the mine, when the following accounts were passed and allowed:—By balance at last account, 590*l.* 5s. 5d.; ores sold (less dues), 1422*l.* 10s. 9d. = 2012*l.* 16s. 2d.—To costs and merchants' bills for March and April, 1851*l.* 0s. 3d.: balance in favour of the adventurers, 161*l.* 15s. 11d.

MINES OF PRUSSIA.—From an official statement, just published, we find that the mines, iron-works, and salt-works of the country yield (including a small surplus of the porcelain manufacture of Berlin of 17,218 rix dollars) 1,117,218 rix dollars.

THE RADSTOCK COLLIERIES.—Among the witnesses on behalf of the Wilts and Somerset Railway, now before Parliament, Mr. S. Struchberry, Fellow of the Zoological Society, and Curator of the Bristol Philosophical Society, was examined by Mr. Alexander—he had paid particular attention to the formation of the coal-field. The first was at present worked to about the extent of 50 per cent.; there was still, however, upwards of 39,000,000 of tons remaining to be worked out. He had calculated that in the second series the quantity of coal was about 424,000,000 of tons; and that quantity would take, according to the present mode of working, 1661 years, before the yield would be exhausted.—*Bath Journal.*

PARTIAL STOPPAGE OF THE KILLALOE SLATE QUARRIES.—The *Tipperary Vindicator* says, that in consequence of the depression in the building trade, and the difficulty the Imperial Slate Company experience in collecting their debts, a large number of the industrious men employed at the Killaloe Slate Quarries have been discharged—thus increasing the mass of misery which already unhappily exists.

FALL OF A RAILWAY BRIDGE.—A lamentable accident happened, on Monday last, on the Chester and Shrewsbury Railway, from the falling of a portion of the bridge crossing the River Dee, by which seven lives were sacrificed. The quarter-past six train, from Chester to Ruabon, started at its usual time, with four carriages—two first-class and two second-class—the number of passengers being about 12; when, on passing over the second arch, on the Wrexham side, one-half of the arch next to the Roodee gave way, and fell into the river, with the line of rails upon which the train was running, leaving the other half standing. The engine and tender had got over—the latter being so close to the falling mass, that it was thrown off the rails. The whole of the carriages, however, were precipitated into the Dee, where they laid endways, almost completely smashed. The bridge is a flat-girder bridge of iron, divided into three spans by two massive stone piers, at equal distances in the stream; and each span is formed of three lengths of cast-iron beams or girders, joined together by bolts, with a semi-circular iron cap over each joint, and the beams being further trussed on the sides by tension or suspension-rods, consisting of a number of parallel wrought-iron plates. The beams, or girders, are in the rib of 2-in. metal; in the flange, 2½ in. Each beam is about 30 ft. in length, and weighs probably 30 tons. Like the Menai Suspension-Bridge, this one has, or rather had, two roadways—the one used for the up trains, and the other for the down trains; and each roadway was carried over the river on two parallel lengths of the beams we have been describing. The roadway and rails used for the trains from Ruabon, &c., to Chester, is still entire and uninjured; that used for trains from Chester to Ruabon, is uninjured for two-thirds of its length—the two spans nearest Chester; and for the remaining third, only one of the two parallel beams supporting that roadway—the outside one next the Roodee—has given way; the other remaining apparently uninjured. The length of beam between the abutment and the next pier (95-ft. span) has three joints in it, and each joint is secured in various ways by bolts, legs underneath it, with clips, &c. There seems to be no doubt that the occasion of the accident was the breaking of the girders, which are evidently not strong enough for the support of the bridge. So powerfully-wrenching and tremendous was the crash, that the strong iron chains which yoke the train were snapped asunder like bars of glass; and one of the carriages was crushed like a nut-shell by the fall. This part of the line was only opened on the 2d of November last, when the first train crossed the bridge to Ruabon, though some additional works, not then completed, have since been finished, and, as we hear, inspected by competent engineers. The entire length of the bridge is 300 ft.; the length of the fallen compartment is 100 ft.; its width, 10 ft.; and the height above the river at high water is 22 ft. The Dee Railway bridge was erected by Mr. Betts, who contracted for its construction; but we have not heard who supplied the iron castings, &c. It is estimated that the loss sustained by the Shrewsbury and Chester Railway Company, by the damage done to the carriages and tender, will be about 2000*l.*; and that sustained by the Chester and Holyhead Railway Company, by the damage done to the structure, will be 2000*l.* at the very least.

FRENCH COMPENSATION CASES.—The proprietor of 6½ hectares of land, demanded 1,096,822·71 frs., the company offered 213,929·14 frs., and the jury awarded 389,360·35 frs. In another case the proprietors demanded 1,748,985 frs., and the jury awarded 536,550 frs.

PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY.—In another column will be found a report of the half-yearly meeting of this company, at which a dividend of 4 per cent., free of income tax, was declared. The report, though most satisfactory, is not a lengthy document—the more detailed one appearing at the annual meeting, when an even more favourable statement is anticipated.

SOUTHAMPTON, FRIDAY.—The Peninsular and Oriental Company's *Oriental* steam-ship, Capt. Brooks, with the heavy portion of the Indian mail, arrived in the docks early this morning from Alexandria. She touched at Malta as usual, and also at Gibraltar, which place she left on Saturday last. There are nearly 160 passengers on board, and a large and valuable freight, amongst which are enumerated eight splendid Arabian horses, as a present from the Pacha of Egypt to her Majesty; two fine camels, and several cases of live quails, numbering nearly 6000, intended for the London markets; turtle, &c.; 99 casks of senna, 122 casks gum, 11 casks elephants' tusks, 2 cases silk, 5 cases alabaster, and 222 baskets of maize. The mails were dispatched by the nine o'clock train.

COMMUNICATION WITH THE SHORE IN CASES OF SHIPWRECK.—Lieut. James J. M. Watson, R.N., of the coast guard station, Somersetshire, transmitted to Lloyd's, a miniature model of an apparatus for effecting a communication with the shore, from a wreck, which consists merely of a cask, a rope, and iron ballast—a 1-inch rope long jammed is coiled into a water cask (after taking out the head), and one end made fast to a staple or ring let into a small iron plate, screwed on to one stave only; the other end is passed through the bung hole (which is rounded off to prevent chafe), and made fast to the vessel. The head of the cask is then refitted, and the apparatus is floated into water; when, by the united force of the wind and sea, it will be driven on shore. When landed a stronger rope can be bent on, afterwards a hawser, and hauled on board, when a life-boat, which otherwise could not be launched, may be hauled off to the assistance of the vessel's crew. Such is a brief explanation of Lieut. Watson's plan; original in detail, though not in principle.

FIRES IN STEAM-VESSELS.—A correspondent of *Jerrold's Weekly Newspaper*, in stating that many of these calamities occur from the self-combustion of coals, suggests the following remedy:—"In steamers, the fresh coals are invariably put on the old stock; to remove the latter, and make it the *upper* part of the coal, would remedy the danger." He also suggests, "that an iron hollow cylinder, perforated with holes to the surface of coals in the vessel, should be inserted in their centre, and brought flush with the deck, which would admit sufficient air, and preserve a proper temperature; and it should form part of the ship's duty to insert a thermometer twice a day, and the temperature regularly reported."


BRITISH MINING OFFICES,

41, MOORGATE-STREET, LONDON.

The Tin, Copper, and Silver-Lead Mines in Cornwall, Devon, and Wales, have lately drawn more than the usual attention of capitalists to their immense wealth, and the large returns made by an efficient application of capital; while the increased knowledge of geology, the vast improvements in the steam-engine, and the economy in working, together with the low price of materials, make them a source of greater and more certain profit than at any former period—thereby constituting them a legitimate, safe, and profitable investment.

These offices have been established at the suggestion of several gentlemen connected with the mining interest, and who have long been impressed with the conviction, that a desideratum, such as the present, is essential in promoting the objects of those who may embark in mining pursuits; and, when it is considered that there are large tracts of rich mineral ground unexplored, where money, judiciously laid out, would produce very handsome profits, there can be no doubt but that such offices will be found highly beneficial to the mining interests—whether considered with reference to the lords or adventurers.

Mr. J. B. Clymo, of Cornwall, who is acknowledged to be a scientific and practical miner, will be in attendance at the offices (unless when required for the purposes of surveying, &c.), and will give the fullest information as to the respective mines, as well as upon mining generally, on application personally, or by letter. It is further intended, for the satisfaction and security of those who may confide their interests to this Office, that all Mineral Property shall be thoroughly examined and reported upon by respectable and competent mining agents, previously to the investment of capital.

A "finance committee" will be appointed from the body of shareholders in each mine, in whose names the funds will be paid into the banker's hands, to defray the expense of working; and as the "Cost-book Principle," under which the best regulated mines in Cornwall have been advantageously managed, will be strictly adhered to, the shareholders will be subject to no liabilities, inasmuch as the accounts will be audited and settled every two months, and copies transmitted to every shareholder. A majority of the shareholders in each particular mine will have the entire management and control thereof, at the meeting called every two months, whether present or by proxy.

A "Register-Book," for the Purchase and Sale of Shares in the various Mines, will always be open for inspection; and when purchases or sales are effected, a trifling charge will be made towards defraying the expense of the offices, while the advantages of rendering transactions of this nature perfectly open, must be manifest and duly appreciated.

All Reports received from the Captains or Agents of the different Mines will be copied into Report Books, to which access can at all times be had.

Parties in the country possessing good and valuable mining ground will be assisted in the formation of a company for working it; and the proprietors of any mines, who may have no offices in London for reference, can transmit their weekly or monthly reports and accounts to be referred to by the London adventurers.

The Offices have been conveniently fitted up, and rooms set apart for the use of those who may be desirous of conferring together upon matters connected with the Mining Interest.

The necessary arrangements for conducting the correspondence, and affording such information as may be sought by parties residing either in London or the country, have been completed, and are such as, it is presumed, cannot fail to secure the support and patronage of all those whose object is the acquisition of accurate data connected with mining operations.

Highly respectable agents have been appointed in the principal towns in the kingdom for the allotment of original shares in the different mines, the affairs of which are conducted at these offices.

All further particulars may be obtained on application at the Offices, 41, Moorgate-street, London.

THOMAS HENRY TAUNTON, Secretary.


WHEAL CONCORD MINING COMPANY.—At an Adjourned Special General Meeting of the adventurers in Wheal Concord Mining Company, held at 4, King-street, Cheapside, London, on Thursday, the 27th day of May, 1847, at Two clock in the afternoon,

HENRY ENGLISH, Esq., in the chair,

The circular convening the meeting was read.

The minutes of the preceding meeting being read, were confirmed.

It was moved by Mr. Davey, seconded by Mr. Pickering,

That, in consequence of the shareholders, or adventurers, not having accepted the 1024 shares newly created, in pursuance of the resolution passed on the 15th inst., at and after the rate of 30s. per share, the purser be authorised to dispose of the said shares, in accordance with the resolution of the last meeting referred to.—Carried unanimously.

Moved by Mr. Crossthwaite, seconded by Mr. Crofts,

That, to further the above arrangement, the purser be instructed to take the necessary steps for the immediate recovery of all arrears of calls due from the adventurers.—Carried unanimously.

Moved by Mr. Pickering, seconded by Mr. Coulthard,

That the purser be instructed to issue the necessary certificates for the above 1024 new shares, upon the payment, into the company's bankers, of 30s. per share on the respective number of shares appropriated—the said certificates to be countersigned by the secretary.—Carried unanimously.

Moved by Mr. Davey, seconded by Mr. Pickering,

That, in future, all transfers of shares be at and after the proportion of 2048 shares, into which the mine is now divided, in accordance with the resolution passed on the 15th inst., instead of 1024 shares, of which number the mine was formerly constituted.—Carried unanimously.

Moved by Mr. Davey, seconded by Mr. Coulthard,

That the auditors having reported certain vouchers had not been furnished, and a communication having been received from the clerk on the mine, that he held the same, the purser be requested to obtain the several vouchers, and lay them before the auditors, so that the accounts may be forthwith passed and presented at the next meeting of adventurers.—Carried unanimously.

Moved by Mr. Davey, seconded by Mr. Pickering,

That Capt. J. B. Clymo having tendered his resignation as agent of the mine, in consequence of arrangements having been made by him for his residence in London, such resignation be accepted; at the same time that the meeting feel it due to offer to Capt. Clymo the thanks of the adventurers, and which are hereby given, for the valuable services rendered by him during the period that the management of the mines has been placed in his hands.—Carried unanimously. HENRY ENGLISH, Chairman.

Moved by Mr. Davey, seconded by Mr. Pickering,

That a vote of thanks be given to the chairman, for his able services rendered on the present occasion. G. W. SNELL, Purser.

EAST COOMBE MINING COMPANY.—At a Special General Meeting of the adventurers in the East Coombe Mine, convened by circular, and held upon the mine, on Tuesday, the 25th May, 1847,

THOMAS HODGE, Esq., in the chair,

The Notice convening the meeting was read; as also the minutes of the two preceding meetings.

The purser's account with the adventurers was submitted, and referred to the committee.

It was moved by Henry English, Esq., and seconded by Oliver V. Pengelly, Esq.,

That, with the view of extending the operations of the company, the number of shares into which the mine is divided be henceforth 2048, and that 30s. per share be paid thereon —£1 at such time as the committee may determine, and 10s. at three months from that date.—Carried unanimously.

It was further resolved,—That the shares so created be offered to the present adventurers, in proportion to the interest at present held by them; and, should any shares remain unappropriated then, that the same be issued by the purser, and the deposits paid into the bankers, to the credit of the committee.

Resolved,—That measures be taken for the renewal of the lease, and also the extension of the sett; and that the results be reported at the next meeting of adventurers.

THOMAS HODGE, Chairman.

A vote of thanks was given to the chairman, for his conduct in the chair.

GEO. CHOWEN, Purser.


NORTH WALES MINING COMPANY,

COUNTY OF MERIONETH.

Divided into 12,500 shares, limited to £10 each, and carried out upon the Cost-book System, with a deposit of £2 10s. per share.

*OFFICES, No. 2, NEW BROAD-STREET, LONDON.*

Applications for shares and prospectuses to be made at the office.

W. T. GRIFFITHS, Purser.

PANTDRAINIOG QUARRY SLATE COMPANY, Bangor.

Registered provisionally, pursuant to the 7 and 8 Vic., cap. 110.

Capital £40,000, in 2000 shares, of £20 each.—Deposit £2 10s. per share.

DIRECTORS.

JOSEPH LAWRENCE BUTLER, Esq., 1, Dale-street, Liverpool.
JOHN FOWLER, Esq., 8, Rodney-place, Clifton, near Bristol.
ISAAC JOHN HORLOCK, Esq., Rocks, Marshfield, Gloucestershire.
HENRY BIRCHFIELD SWABEY, Esq., Great Cumberland-st., Hyde-park.
(With power to increase their number to seven).

BANKERS.

Messrs. Charles Hopkinson and Co., 3, Regent-street.
Messrs. Puget, Bainbridges, and Co., 12, St. Paul's Churchyard.

SOLICITORS.

Messrs. Richardson, Smith, and Sadler, 28, Golden-square, London.

SECRETARY—Mr. John Henry Murchison.

*OFFICE*—19, *ESSEX-STREET, STRAND, LONDON.*

This company is formed for the purpose of working the Pantdrainiog Slate Quarry, in the parish of Llanllechid, Carnarvonshire, the proposed purchase of which can be effected on terms most advantageous to the company.

The slate from the Pantdrainiog Quarry is of the pure Bangor vein, and of the finest quality and colour. The quarry is situate about five miles from Bangor, and is a portion of an estate covering an area of about 39½ acres. The great Holyhead road passes through this property, and connects the quarry with the wharf at Garth Point on the Menai Straits, and also with the Chester and Holyhead Railway, which crosses the turnpike road, at a point about three miles distant, the proximity to which will enable the company to convey slates into the Liverpool, Manchester, and Midland markets, with a punctuality and despatch that cannot now be attained through the medium of shipping.

The quarry, upon which a large sum has been already expended, has been opened for 20 years; *and there is at present about 80,000 tons of marketable slate to be obtained from the metal now uncovered.*

The property is held for a term of years, which will expire in 1903, without any royalty, and upon exceedingly favourable terms.

Taking the value of 1 ton of slate at a price much below that which is obtained, and estimating the cost of getting, making, and cartage, and all the expenses of management, there will remain a net profit upon the capital of £40,000, equal to 20 per cent. per annum.

Parties desirous of taking the cancelled shares, may apply personally till the 15th day of June next, to any of the following gentlemen:—in London, to the secretary, at the office, No. 19, Essex-street, Strand; to Messrs. Richardson, Smith, and Sadler, 28, Golden-square; or to Mr. James Lane, mining agent, 75, Old Broad-street, City; in Liverpool, to Messrs. D. and J. B. Neilson, or to Messrs. Sadlow, Brothers; in Manchester to Messrs. Cardwell and Sons, or to Mr. Augustus Hahn; in Birmingham, to Mr. W. H. Collis; in Bristol, to Mr. Henry Dayrell, Clare-street; and in Exeter, to Mr. R. Tripp, 12 and 13, High-st.

Prospectuses, with the engineer's report, and engraved plans of the quarry, may be had on application at any of these addresses; and at the office of the *Mining Journal*, 26, Fleet-street, London.

# Current Prices of Stocks, Shares, & Metals.

*STOCK EXCHANGE, Saturday morning, Eleven o'clock.*

Bank Stock, 7 per Cent., 191½ 2
3 per Cent. Reduced Ann., 87½ 7
3 per Cent. Consols Ann., 88¾ ⅞ ¾
3 per Cent. Annuities, —
3¼ per Cent. Ann., 85⅞ ¾
Long Annuities, 8¾
India Stock, 10½ per Cent., 241
3 per Cent. Consols for Acc., 87½ ¾
Exchequer Bills, 1000*l.* 2d., par 3 pm.

Belgian Bonds, 4½ per Cent., 92½ 3
Dutch. 2½ per Cent., 56⅞ ⅝ ⅞
Brazilian, 5 per Cents., 84
Chilian, 6 per Cents., 92
Mexican, 5 per Cents., 20⅝ ¾
Spanish, 5 per Cents., 22½
Ditto 3 per Cents., 34½ 4
Portuguese, 5 per Cents., —
Russian, 5 per Cents., 110 9

MINES.—There has been a considerable deal of business done this week in the mining share market, when compared with its position for the past four weeks. The mines, generally, in the western part of Cornwall, are reported as much improved; and several inquiries have been made for some shares at an advance on our last week's quotations. Treviskey and Barrier account meeting was held on the 17th, when a dividend of 11*l.* 2s. 6d. was declared, with a balance in hand, and two month's ore bill to receive—the bottom levels continuing rich. Tresavean account was held on the 25th, when a dividend of 7*l.* 10s. per 96th share was declared. The lode at Wheal Josiah, in Great Devon Consols, continues very good—stated to be worth 160*l.* per fm.

A discovery of some importance was stated to have been made in the engine-shaft of West Wheal Maria, which induced transactions from 1*l.* to 2*l.* per 2-560th share; and, although report states the improvement continues, a reaction has taken place, and business cannot be done at the latter price—perhaps, this arises from a call expected at the next meeting.

A great rise has taken place in Plymouth Wheal Yeoland shares since our last—business having been done at our present quotations, and buyers found. Wheal Francos are also in request.

In Treleighs there have been several transactions during the week, which are still in request. There have also been purchasers found for North Roskear, Condurrow, North Pool, and Stray Park, at an advance on our last week's prices. Shares in the following mines have changed hands—viz.: Trehane, Kirkcudbright, Devon and Courtenay, Fortescue, West Wheal Maria, Condurrow, East Crowndale, Herodsfoot, South Tamar, Tavy Consols, Treleigh, Tremayne, Wheal Maria (tin). North Roskear, Caradon Consols, Alfred Consols, Trehane, Franco, Plymouth Wheal Yeoland, &c.

In the foreign share market, we do not find much activity—the only transactions having been, as far as we can learn, confined to Bolanos and Australians.

The corn market to-day is stagnant, prices being from 6s. to 8s. lower nominally, but no sales of any moment could be effected even at that reduction—the accounts from the continent being so very favourable, and the arrivals so extensive. By next market day the fall in prices was expected to be much more considerable.

HULL, THURSDAY.—The downward tendency of the wheat market—the easier rates of discounts, and the favourable weather, have combined to impart a firmer tone to shares of all kinds. Holders are less anxious to realise; and, although the demand is not great, buyers have been compelled to grant higher prices.

EXPORTATION OF THE PRECIOUS METALS.—The following are the official returns of the exports of gold and silver from the port of London for week ending 25th inst.:—
Silver coin to Hamburgh .......... 36,000 ounces.
Silver bars to Hamburgh .......... 83,568 „

## LATEST CURRENT PRICES OF METALS.

*LONDON, MAY 28, 1847.*

| | £ s. | £ s. d. | | £ s. | £ s. d. |
|---|---|---|---|---|---|
| IRON—Bar *a*. Wales..*ton* | 0 0— | 8 10 0 | COPPER—Ordin. sheets, *lb.* | 0 0— | 0 0 11 |
| „ ..London | 0 0— | 9 10 0 | „ bottoms | 0 0— | 0 0 12 |
| Nail rods „ | 0 0— | 10 10 0 | YELLOW METAL SHEATHING | 0 0— | 0 0 9½ |
| Hoop (Staf.) „ | 0 0— | 11 15 0 | TIN—Com. blocks *g*..*cwt.* | 0 0— | 4 12 0 |
| Sheet „ | 0 0— | 13 0 0 | „ bars | 0 0— | 4 13 0 |
| Bars „ | 0 0— | 11 5 0 | Refined | 0 0— | 4 15 0 |
| Welsh cold-blast foundry pig | 4 10— | 5 5 0 | Straits *h* | 0 0— | 4 6 0 |
| | | | Banca | 0 0— | 4 12 0 |
| Scotch pig *b*, Clyde | 3 2 6 | 3 4 0 | TIN-PLATES—Ch., IC *i*, box | 1 9— | 1 11 0 |
| Rails, average | 9 0— | 9 5 0 | „ IX | 1 15— | 1 17 0 |
| Russian, CCND *c* | 0 0— | —— | Coke, IC | 0 0— | 1 5 0 |
| „ PSI | 0 0— | —— | „ IX | 0 0— | 1 11 0 |
| „ Gourieff | 0 0— | —— | LEAD—Sheet *k* ....*ton* | 0 0— | 19 10 0 |
| „ Archangel | 0 0— | 13 10 0 | Pig, refined | 0 0— | 20 10 0 |
| Swedish *d*, on the spot | 0 0— | 11 15 0 | „ common | 0 0— | 18 15 0 |
| „ Steel, fagt. | 0 0— | 16 5 0 | „ Spanish, in bd. | 17 10— | 17 15 0 |
| „ „ kegs *e* | 0 0— | 15 0 0 | SPELTER—(Cake) *l* on spot | 0 0— | 20 0 0 |
| COPPER—Tile *f* | 0 0— | 97 0 0 | „ for arrival | 0 0— | 20 0 0 |
| Tough cake | 0 0— | 98 0 0 | ZINC—(Sheet) *m* export.* | 0 0— | 27 0 0 |
| Best selected | 0 0 | 101 0 0 | QUICKSILVER *n* ....*lb.* | 0 0— | 0 4 6 |

*a* Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto *e* In kegs ½ and ¾-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash. *m* Discount 1½ per cent. *n* Discount 1½ per cent. * For home use it is 32*l.* per ton.

IRON.—Welsh and Staffordshire, precisely as last quoted, with a languid demand. Scotch Pigs are lower, with still a downward tendency.

In TIN, TIN PLATES, COPPER, and LEAD, no new feature to notice.

SPELTER has given way this week, and sales have been made at 20*l.* per ton on the spot. The stock remains very limited.

## RAILWAY TRAFFIC RETURNS.

From these returns, it will be seen, that the amount of traffic for the last week, on nearly 2730 miles of railway, was 164,584*l.*, thus accounted for:—86,205*l.* for the conveyance of passengers only, 42,714*l.* for the carriage of goods, and a remainder of 36,165*l.* for passengers and goods together, not respectively apportioned; being an increase over the corresponding week of last year of 21,363*l.*, when the mileage was about 2,292.

| Name of Railway. | Lgth. Rway. | Present actual cost. | Last Div. | Traffic Returns. 1847 | 1846 |
|---|---|---|---|---|---|
| Arbroath and Forfar | 15 | £142,900 | 3 *p.c.* | £161 4 9 | 196 |
| Chester and Birkenhead | 15 | 658,293 | 2½ | 689 17 2 | 592 |
| Dublin and Drogheda | 35 | 689,248 | 3½ | 865 6 11 | 760 |
| Dublin and Kingstown | 6 | 349,736 | 9 | 914 6 5 | 964 |
| Dundee and Arbroath | 16½ | 156,323 | 6 | 322 3 0½ | 272 |
| East Lancashire | 28 | 814,417 | — | —— | — |
| Eastern Counties | 184½ | 6,513,026 | 7 | 11590 9 5 | 8570 |
| Eastern Union | 17 | 227,253 | — | 555 0 0 | — |
| Edinburgh and Glasgow | 46 | 2,112,136 | 6 | 3500 3 3 | 3329 |
| Glasgow, Paisley, and Ayr | 53 | 1,567,281 | 7 | 2511 0 3 | 2187 |
| Glasgow, Paisley, & Greenock | 23 | 835,918 | 2 | 1173 16 2 | 1040 |
| Great Southern and Western | 56½ | 1,343,718 | — | 1510 7 3 | — |
| Great Western | 241 | 9,714,939 | 8 | 21826 2 9 | 18999 |
| Ipswich and Bury | 26½ | 303,768 | — | 447 0 0 | — |
| London and North Western | 378½ | 18,042,004 | 10 | 43724 8 4 | 39946 |
| London and Blackwall | 4 | 1,102,717 | 1½ | 1296 7 1 | 1131 |
| London, Brighton, & South Coast | 112 | 5,109,667 | 7 | 11772 1 3 | 4608 |
| London and South-Western | 127 | 4,278,789 | 9 | 9688 13 0½ | 7000 |
| Manchester & Leeds | 117½ | 5,036,391 | 5½ | 8514 15 2 | 6106 |
| Manchester, Sheffield, & Lincolnsh. | 49½ | 1,678,108 | 5 | 2126 4 6 | 1619 |
| Midland Company | 329½ | 7,862,274 | 7 | 20986 3 1 | 16061 |
| Newcastle and Berwick | 9 | 1,184,079 | 5 | 728 0 2 | — |
| Newcastle and Carlisle | 65 | 1,184,080 | 5 | 2338 8 0 | 1935 |
| Norfolk | 70½ | 1,199,689 | 7 | 1935 9 0 | 1305 |
| North British | 72½ | 1,459,958 | — | 1731 8 1 | — |
| Preston and Wyre | 30 | 432,014 | 2½ | —— | 702 |
| Shrewsbury and Chester | 15 | 354,945 | — | 423 0 0 | — |
| South Devon | 20 | 1,061,283 | 5 | 627 8 4½ | — |
| South-Eastern | 148½ | 5,888,411 | 3½ | 8274 17 2 | 7103 |
| Taff Vale | 30½ | 888,411 | 6½ | 1367 5 6 | 1224 |
| Ulster | 25 | 358,353 | 5½ | 898 10 3 | 589 |
| York and Newcastle | 183½ | 1,712,317 | 9 | 8463 13 10 | 6739 |
| York and North Midland | 162½ | 2,483,256 | 10 | 6303 8 11 | 5053 |

## COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Adair's Main 16—Bate's West Hartley 17—Buddle's West Hartley 17 6—Carr's Hartley 17 6 Davison's West Hartley 17 6—Dean's Primrose 15 6—Delaval Hartley 16 6—Dipton Tanfield 15—Hasting's Hartley 17—Holywell Main 17 6—New Tanfield 16—North Percy Hartley 17—West Hartley 17 6—Wylam 16 9—Wall's End Harton 15 3—Hedworth 14 6—Hilda 15 6—Killingworth 15 6—Riddell's 15 3—Wharncliffe 15 6—Eden Main 16—Belmont 16—Braddyll's Hetton 17—Haswell 17 0 to 17 9—Shotton 16 6 to 16 9—Stewart's 17 3—Hudson's Hartlepool 16—High Thornley 15 6—Kelloe 16 9—Adelaide Tees 16 6—Brown's Deanery 15 6—South Durham 15 6—Derwentwater Hartley 17.—Ships at market, 216.

WEDNESDAY.—Buddle's West Hartley 17—Carr's Hartley 17—Davison's West Hartley 17—Delaval Hartley 16—Dipton Tanfield 14 6—Hasting's Hartley 17—Holywell Main 17 6—Nelson's West Hartley 17—Ord's Redheugh 16—West Hartley 17—Wylam 16 9—Wall's End Bell and Brown 15 3—Gosforth 15 3—Killingworth 15—Riddell's 15 3—Walker 15—Eden Main 15 6—Braddyll's Hetton 17—East Hetton 15—Haswell 17 6—Hetton 17—Keepier 16—Lambton 16 9—Russell's Hetton 16 9—Shotton 16 6—Stewart's 17—Hudson's Hartlepool 16—High Thornley 14 9—Heugh Hall 15 3—Adelaide Tees 16 3 to 16 6—Seymour Tees 15 6—South Durham 15 3—Cowpen Hartley 17—Derwentwater Hartley 16 6—Howard's West Hartley Netherton 17.—Ships at market, 203.

FRIDAY.—Bates's West Hartley 16 0—Buddle's West Hartley 16 6—Burnhope Hartley 14 0—Carr's Hartley 16 6—Chester Main 14 6—Davison's West Hartley 16 6—Delaval Hartley 15 6—Dipton Tanfield 14 6—Hastings' Hartley 16 6—Nelson's West Hartley 16 6—North Percy Hartley 16—Original Tanfield 15 3—Wylam 16 6—Wall's End Bewick and Co. 15 3—Brown's Gas 14 6—Hotspur 15—Harton 15 3—Hilda 15—Killingworth 15 9—Walker 15—Eden Main 15 6—Belmont 15 6—Bell 15 6—Hetton 17—Keepier 16—Lambton 16 9—Stewart's 17—Hudson's Hartlepool 16—High Thornley 15—Adelaide Tees 16 3—Crowndon Tees 15—Richardson's Tees 14—South Durham 15 3—Tees 16 6—Cowpen Hartley 16 6—Derwentwater Hartley 16 6—Howard's West Hartley Netherton 16 6—Llangennech 23 6.—Ships at market, 169; sold, 61; unsold, 108.

## PRICES OF MINING SHARES.

### BRITISH MINES.

| Shares. | Company. | Paid. | Price. |
|---|---|---|---|
| 1000 | Abergwessin | 7 | 12 |
| 512 | Albert Consols | 1 | 2½ |
| 1024 | Alfred Consols | 4½ | 40-45 |
| 235 | Andrew and Nangiles | 28½ | 16 |
| 10000 | Ayrshire Iron Company | 2½ | 2½ |
| 1624 | Balleswidden | 9 | 18 |
| 128 | Balnoon Consols | 25 | 25 |
| 10000 | Banwen Iron Co. | 2 | — |
| 1000 | Barristown | 4½ | 17 |
| 4000 | Bedford | 2½ | 3½ |
| 128 | Besore Lead Mine | 14 | 10 |
| 315 | Birch Tor Tin Mine | 21½ | 6 |
| 8000 | Blaenavon | 50 | 30 |
| 100 | Botallack | 175 | 200 |
| 120 | Brewer | 5 | 7 |
| 10000 | British Iron, New, regis. | 10 | 17¾-18¼ |
| — | Ditto ditto, scrip | 10 | 19 |
| 128 | Budnick Consols | 52½ | 40 |
| 128 | Burthy | 20 | 12 |
| 100 | Bwlch Cwmerfin | 20 | — |
| 128 | Callestock | 17 | 50 |
| 1000 | Callington | 19 | 29 |
| 256 | Caradon Consols | 47 | 5 |
| 256 | Caradon Copper Mine | 9½ | 1 |
| 256 | Caradon Mines | 22½ | 18 |
| 256 | Caradon United | 24 | 15 |
| 256 | Caradon Wh. Hooper | 20 | 4 |
| 1000 | Carn Brea | 15 | 110 |
| 2048 | Carmarthen Consols | 2 | 5 |
| 112 | Charlestown | 200 | 100 |
| 166 | Cleveland | 9 | 2½ |
| 512 | Coatlithe Hill | ½ | 1-1½ |
| 1900 | Combmartin | 7½ | 4½ |
| 1000 | Comblawn | ¾ | 1½ |
| 128 | Comfort | 45 | 80 |
| 256 | Condurrow | 20 | 30 |
| 2560 | Cook's Kitchen | 14 | 5½ |
| 5000 | Coombe Valley Quarry | 1 | 1½ |
| 1000 | Copper Bottom | 1 | 5 |
| 1024 | Cosheen | 4½ | 10 |
| 240 | Craddock Moor | 15½ | 15 |
| 128 | Creeg Braws | 120 | 150 |
| 500 | Cubert Mine | 12½ | 20 |
| 2048 | Dartmoor Consols | 2 | 2½ |
| 7100 | Derwent | 8½ | 5 |
| 1024 | Devon & Courtenay Con. | 5½ | 3 |
| 1000 | Dhurode | 2 | 5 |
| 186 | Dolcoath | 30 | 50 |
| 2560 | Drake Walls | 4 | 4 |
| 10000 | Durham County Coal | 45 | 9 |
| 256 | East Alvenney | 3 | 10 |
| 112 | East Caradon | 40 | 40 |
| 2048 | East Crowndale | 4½ | 1½ |
| 512 | East Combe Silver-Lead | 6½ | 6½ |
| 128 | East Pool | 5 | 20 |
| 100 | East Relistian | 22 | 40 |
| 9000 | East Tamar Consols | 1⅝ | 2 |
| — | East Wheal Albert | 1 | 3 |
| 94 | East Wheal Crofty | 280 | 310 |
| 256 | East Wheal Fortune | 2 | 3 |
| 128 | East Wheal Rose | 50 | 1400 |
| — | East of Scotland Iron Co. | 2½ | 2 |
| 123 | East Wheal Seton | 14 | 20 |
| 256 | Exmoor Wh. Eliza | 3½ | 10 |
| 512 | Fowey Consols | 40 | 45 |
| 20000 | Galvanised Iron Co. | 10 | 9½ |
| 10000 | Gen. Mining Co. for Irel. | 2 | 1½ |
| 2048 | Georgia Tin Mines | 1½ | 1½ |
| 256 | Gonamena | 31½ | 65 |
| 128 | Goonvrea | 4 | ½ |
| 244½ | Grambler & St. Aubyn | — | 20 |
| 100 | Great Consols | 1000 | 400 |
| 256 | Great Callestick Moors | 22 | 25 |
| 2560 | Great Michell Consols | 1½ | 4 |
| 256 | Great Resugga Moor | 2 | 4 |
| 512 | Gt. Wh. Rough Tor Con. | 6½ | 38 |
| 1500 | Great South Tolgus | 2 | 2 |
| 100 | Grogwinion | 5 | — |
| 1000 | Gunnis Lake | 1½ | 3 |
| 256 | Gwinear Consols | 5 | 20-22½ |
| 1000 | Hanson | 14 | 2 |
| 1000 | Harrowbarrow Old Mine | 6½ | 2½ |
| 800 | Hawkmoor | 3 | 2 |
| 6000 | Heignston Down Con. | ½ | 2½ |
| 256 | Herodscombe | ½ | 9 |
| 256 | Herodsfoot | 14 | 11½ |
| 10000 | Hibernian | 12½ | 1 |
| — | Hobb's Hill | 4 | 3 |
| 1000 | Holmbush | 18 | 8 |
| 827 | Kirkcudbrightshire | 4½ | 10½ |
| 2048 | Lamherooe Wh. Maria | 9 | 3 |
| 74 | Lanarth & Penstruthal | — | 10 |
| 2048 | Lanivet Consols | 4 | 2 |
| 200 | Larkholes | 1 | 3 |
| 160 | Levant | — | 90 |
| 1000 | Lewis | 15 | 6½ |
| 1280 | Llancynfelin | 6 | 5 |
| 1000 | Llwyn Malees | 5 | — |
| 3600 | Llynvi Iron | 50 | 60-65 |
| 256 | Lostwithiel Consols | 7 | 7 |
| 128 | Ludcott | 3 | 3 |
| 4000 | Marke Valley | 10 | 3½ |
| 5000 | Mendip Hills | 2 | 1½ |
| 128 | Metha | 23 | 130 |
| 20000 | Mining Co. of Ireland | 7 | 8½ |
| 256 | New East Crowndale | 3½ | 3½ |
| 128 | North Fowey Consols | 25 | 20 |
| 100 | North Pool | 45 | 210 |
| 70 | North Roskear | 10½ | 400 |
| 512 | North Treburget | 2 | 3 |
| 100 | North United | 41 | 20 |
| 256 | North Wh. Abraham | ½ | 10 |
| 262 | North Wh. Leisure | 1½ | 3½ |
| 128 | North Wh. Providence | 2½ | 8 |
| 15000 | Northern Coal Co. | 23 | 2 |
| 1200 | Old Delabole Slate Co. | 25 | 50 |
| 2000 | Pantdrainiog Slate Co. | 2½ | 2½ |
| 128 | Par Consols | 900 | 1000 |
| 256 | Penhallow Moor | 15 | 4 |
| 4000 | Pennant | 1 | 2½ |
| 100 | Penrhiw | 30 | 65 |
| 256 | Pentuan Wheal Mary | 2½ | 6 |
| 128 | Pen-y-Cefn Mine | 50 | 55 |
| 1280 | Perran St. George Un. | 13 | 20 |
| 128 | Perran Wh. Virgin | 9½ | 65 |
| 512 | Plymouth Wh. Yeoland | 2½ | 25 |
| 2048 | Prince Edward | 1½ | 1½ |
| 112 | Providence Mines | 35 | 45 |
| 256 | Redruth Consols | 3 | 10 |
| 10000 | Rhymney Iron | 50 | 30 |
| 256 | Rose Consols | 10 | 6 |
| 1000 | Rosewall Hill | 1 | 5 |
| 256 | Rosewarva Mines | — | 12 |
| — | Shotts Iron Company | 50 | 70 |
| 2500 | Silver Valley | 4 | 2 |
| 128 | South Caradon | 10 | 410 |
| 2000 | South Dolcoath | 2 | 2 |
| 256 | Sth. Friendsh. Wh. Ann | 14 | 14 |
| 200 | South Harvannah | 23 | 26 |
| 9000 | South Tamar | ½ | ½ |
| 256 | South Tolgus | 2½ | 18 |

### BRITISH MINES—*continued.*

| Shares. | Company. | Paid. | Price. |
|---|---|---|---|
| 600 | South Towan | 10 | 1½ |
| 256 | South Trelawney | 15½ | 10 |
| 128 | South Yeoland | 16½ | 20 |
| 128 | South Wheal Basset | 110 | 80 |
| 124 | South Wh. Francis | 100 | 200 |
| 256 | South Wh. Hope | — | 5 |
| 1000 | South Wh. Maria | 2½ | 2 |
| 256 | South Wheal Rose | 11½ | 1 |
| 10000 | Southern & Western, Irish | 2 | 4-5 |
| 280 | Spearne Moor | 30 | 40 |
| 256 | St. Austell Consols | 8 | 14 |
| 94 | St. Ives Consols | — | 320 |
| 128 | St. Michael Penkivel | 5 | 10 |
| 1000 | Stray Park | 43 | 30 |
| 9600 | Tamar Consols | 5 | 5½ |
| 1024 | Tavy Consols | 4 | 4 |
| 6000 | Tincroft | 7 | 9 |
| 3000 | Tin Vale Consols | ½ | 1½ |
| 256 | Ting Tang | 15 | 9 |
| 128 | Tokenbury | 143½ | 10 |
| 256 | Tolpetherwin | 3½ | 3½ |
| 256 | Trehane | 2 | 23 |
| 5000 | Treleigh Consols | 6 | 4 |
| 256 | Trenow Consols | 30 | 25 |
| 96 | Tresavean | 10 | 250 |
| 120 | Trethellan | 5 | 27½ |
| 120 | Treviskey and Barrier | 130 | 170 |
| 256 | Trewollack | 20 | 20 |
| 128 | Trewellard | 12 | 26½ |
| 6000 | United Hills | 5 | ½ |
| 100 | United Mines | 300 | 450 |
| 256 | Wellington Mines | 15 | 30 |
| 128 | West Basset | 45 | 30 |
| 256 | West Caradon | 20 | 168 |
| 128 | West Cargoll | 2 | 12 |
| 512 | West Fowey Consols | 40 | 15 |
| 256 | West Grambler | 7 | 8 |
| — | West Kekewich Consols | — | 3 |
| 256 | West Providence | 1 | 17 |
| 200 | West Seton | 40 | 70 |
| — | West of Scotland Iron Co. | 210 | 217 |
| 120 | West Trethellan | 5 | 40 |
| 256 | West United Hills | 2½ | 4 |
| 256 | West Wh. Friendship | 7½ | 4 |
| 3845 | West Wheal Jewel | 11 | 2½ |
| 2560 | West Wh. Maria | 1½ | 2 |
| 256 | West Wheal Shepherd | 5 | 8 |
| 256 | West Wheal Tolgus | 21½ | 3 |
| 256 | West Wheal Treasury | 19 | 18-20 |
| 5200 | Wicklow Copper | 5 | 12 |
| 184 | Wheal Adams | 41 | 10 |
| 1000 | Wheal Agar | — | 8 |
| 256 | Wheal Albert | 10 | 8 |
| 128 | Wheal Acland | 13 | 2 |
| 256 | Wheal Allen | 2 | 5 |
| 237 | Wheal Anderton | 16½ | 26 |
| 128 | Wheal Ann | — | 50⅞ |
| 128 | Wheal Arvose | 3½ | 4 |
| 1024 | Wheal Ash | 2½ | 12 |
| 120 | Wheal Bal | 5½ | 20 |
| 2560 | Wheal Barbara | 1½ | 1½ |
| 256 | Wheal Benny | 6½ | 5 |
| 256 | Wheal Blencowe | 8 | 15 |
| 256 | Wheal Bucketts | 20 | 22 |
| 256 | Wheal Byon Consols | ½ | ½ |
| 256 | Wheal Calstock | 3 | 4 |
| 136 | Wheal Clifford | 190 | 190 |
| 1024 | Wheal Concord | 6½ | 1½ |
| 128 | Wheal Courtenay | — | 20 |
| 6000 | Wheal Curtis | 1½ | 1½ |
| 256 | Wheal Dyke | 12 | 13 |
| 256 | Wheal Fortescue | 5½ | 9½ |
| 512 | Wheal Fortune Consols | 3½ | 6½ |
| 2048 | Wheal Frederick | 2 | 2 |
| 388 | Wheal Franco | 27 | 35 |
| 256 | Wheal Gill | 19½ | 9 |
| 1024 | Wheal Grace | 2 | 2½ |
| 128 | Wheal Harriet | 45 | 50 |
| 2048 | Wheal Holwell | 1½ | 1½ |
| 256 | Wheal Jane | 11 | 16 |
| 256 | Wheal Kekewich | 4 | 4 |
| 256 | Wheal Louisa | 6½ | 11 |
| 112 | Wheal Margaret | 79 | 250 |
| 256 | Wheal Maria (Hayle) | 19 | 18-20 |
| 1024 | Wheal Maria | 1 | 350 |
| 4000 | Wheal Martha Consols | 5 | 2 |
| 512 | Wheal Mary Ann | 5 | 24-25 |
| 256 | Wheal Mary Consols | 38 | 25 |
| 256 | Wheal Mary (Lanivet) | 6½ | 4 |
| 256 | Wheal Maude | 1½ | 1½ |
| 128 | Wheal Pollard | 12½ | 12 |
| 210 | Wheal Prospect | 4 | 7 |
| 128 | Wheal Reeth | 1 | 17 |
| 128 | Wheal Rose | 60 | 50-55 |
| 2048 | Wheal Samson | — | 20 |
| 99 | Wheal Seton | 214 | 850 |
| 256 | Wheal Sisters | 29½ | 35 |
| 256 | Wheal Sophia | 3½ | 10 |
| 128 | Wheal Spearne | 10 | 75 |
| 128 | Wheal St. Ann | 9 | 15 |
| 260 | Wheal Trelawney | 7½ | 112-115 |
| 256 | Wh. Tremaine (St. Ervan) | 1½ | 20 |
| 256 | Wheal Tremayne | 35 | 35 |
| 128 | Wheal Trew | 20 | 21 |
| 256 | Wheal Trevenna | 3 | 4 |
| 92 | Wheal Tryphena | 140 | 200 |
| 128 | Wheal Venland | 12½ | 10 |
| 256 | Wheal Vlow (Perranz.) | ½ | ½ |
| 184 | Wheal Vyvvan | — | 60 |
| 256 | Wheal Williams | 2 | 18 |

### FOREIGN MINES.

| Shares. | Company. | Paid. | Price. |
|---|---|---|---|
| 5000 | Alten Mining Company | 14½ | 4½ |
| 15000 | Asturian Mining Co. | 10 | 6 |
| 20000 | Australian | 2 | 6-6½ |
| 10000 | Anglo-Mexican Co | 100 | 1 |
| 12374 | Ditto Subscription | 25 | 2½ |
| 3000 | Bolanos | 150 | 6½ |
| 2000 | Ditto Scrip | 15 | 6½ |
| 12000 | Brazilian Imperial | 20 | 2½ |
| 10000 | Cobre Copper Co. | 40 | 25½ |
| 6500 | Colombian Co. regis. | 55 | 4½ |
| 5000 | Ditto Scrip | 5½ | 4½ |
| 5000 | Copiapo Mining Co | 14 | 3½ |
| 10000 | General Mining Ass'n. | 20 | 15½ |
| 5000 | Kinzigthal Mining Ass. | 2 | 3 |
| 20051 | Mexican Company | 59 | — |
| 2000 | Mexican & South Amer. | 7 | 3 |
| 5000 | Mocaubas & Cocaes | 25 | 5½ |
| 29320 | Rl. del Monte, regis. / Ditto unregistered | 28½ | av. 3½ |
| | Ditto Red Debentures | — | 16 |
| | Ditto Black ditto | — | 14 |
| | Ditto Loan Notes | 150 | 97½ |
| 7000 | Royal Santiago | 10 | 5 |
| 2000 | Pachuca Mines | 4 | 4½ |
| 11000 | St. John del Rey | 15 | 7 |
| 13174 | United Mexican | 28½ | 2½ |

### SOUTH AUSTRALIAN SHARE MARKET.

| Shares. | Company. | Paid. | Price. | Shares. | Company. | Paid. | Price. |
|---|---|---|---|---|---|---|---|
| 2000 | Adelaide | 5 | 6 | 18 | South Para | 15 | 50 |
| 600 | Barossa Range | 4 | 24 | 1000 | Poonawurta | — | 9½-10 |
| 2464 | Burra Burra | 5 | 90 | 400 | Princess Royal | — | 259 |
| 436 | Grand Junction | 15 | 28 | 10000 | Royal South Australian | — | 55½ |
| 200 | Greenock Creek | 5 | 12 | 600 | Victoria | 2 | 2 |
| 100000 | Scottish Invest. Co. | 1 | 1½ | 500 | Wakefield | 2 | 2 |

### SOUTH AUSTRALIA AND NEW ZEALAND.

100000 North British Australasian (Kaw-aw, &c.) .......... 1 .. 1

*** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

## JOINT-STOCK BANKS.

| Companies. | Shares. | Paid. | Price. |
|---|---|---|---|
| Australasia | 22,500 | £40 | £22 |
| British North American | 20,000 | 50 | 44½ |
| Colonial | 20,000 | 25 | 15½ ¾ |
| Commercial of London | — | 20 | 22 |
| London and Westminster | 40,000 | 20 | 26½ ¾ |
| London Joint-Stock | 60,000 | 10 | 16½ |
| National of Ireland | 20,000 | 22½ | 19½ |
| Provincial of Ireland | 20,000 | 25 | 45 ½ |
| Ditto New | 4,000 | 10 | 16 |
| Union of Australia | 20,000 | 25 | 24 3½ |
| Union of London | 60,000 | 10 | 12 |

## THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending May 22, was 16,188; amount of money, £67 9s. 0d.

## LEAD ORES

*Sold at Truro, on the 20th May, 1847.*

| Mines. | Tons. | Price. | Purchaser. |
|---|---|---|---|
| Besore | 9 | £21 0 0 | Mullins, Brothers. |
| ditto | 11½ | 15 2 0 | Michell and Son. |
| ditto | 11 | 5 15 6 | ditto |
| Total tons | 31½. | | |

*Sold, at Truro, on the 21st May, 1847.*

| Mine. | Tons. | Price. | Purchasers. |
|---|---|---|---|
| Cargoll | 29 | £12 12 6 | Penpoll Company. |
| ditto | 29 | 12 16 6 | Michell and Son. |
| Total tons | 58. | | |

*Sold at Holywell, on the 25th May, 1847.*

| Mine. | Tons. | Price. | Purchasers. |
|---|---|---|---|
| Peel | 120 | £10 8 6 | Mather and Co. |

*Sold at Holywell, on the 27th May, 1847.*

| Mines. | Tons. | Amount. | Purchasers. |
|---|---|---|---|
| Penyrhenblas | 45 | £10 4 0 | Mather and Co. |
| ditto | 45 | 10 4 0 | ditto |
| Westminster | 67 | 9 0 0 | ditto |
| ditto | 33 | 9 18 6 | ditto |
| Belgrave | 30 | 9 9 0 | Walker and Co. |
| Jamaica | 25 | 9 12 0 | ditto |
| ditto | 25 | 12 2 6 | Newton, Keates, & Co. |
| Halkin Hall | 5½ | 9 5 0 | Mather and Co. |
| Penybryn | 9 | 9 3 0 | ditto |
| Bwlctrydyfrau | 4½ | 9 5 0 | ditto |
| ditto | 4½ | 9 5 0 | Walker and Co. |
| East Logylas | 83 | 9 6 6 | ditto |
| Goginan | 29 | 13 3 0 | Mather and Co. |
| Rhoswydal | 33 | 9 7 6 | Newton, Keates, & Co. |
| Dyfyndwy | 15 | 9 6 0 | Walker and Co. |
| Nantymdyn | 7 | 9 10 0 | ditto |
| Total tons | 460½. | | |

## BLACK TIN.

*Sold, at the Mine, on the 18th of May, 1847.*

| Mines. | Tons. | Price. | Purchasers. |
|---|---|---|---|
| Charlestown Mines | 10½ | £48 5 0 | Daubuz and Co. |
| ditto | 10½ | 48 5 0 | Williams and Co. |
| ditto | 17 | 47 10 0 | Calenick Smelting Co. |
| ditto | 1½ | 34 0 0 | ditto |
| Total tons | 40½. | | |

*Sold on the 27th of May, 1847.*

| Mines. | Tons. | Price. | Purchasers. |
|---|---|---|---|
| Royal Polberou Consols | 6 | £47 5 0 | Calenick Smelting Co. |
| ditto | 4 | 43 10 0 | ditto |
| ditto | 4 | 43 10 0 | Daubuz. |
| ditto | 1 | 42 2 6 | Calenick Smelting Co. |
| Total Tons | 15. | | |

## COPPER ORES.

*Sampled May 6, and Sold at Swansea, May 27, 1847.*

| Mines. | Tons. | Prod. | Stand. | Price. | Mines. | Tons. | Prod. | Stand. | Price. |
|---|---|---|---|---|---|---|---|---|---|
| Cobre | 115 | 14 | 94½ | £10 19 0 | Berehaven | 106 | 10½ | 99 | £ 7 15 6 |
| ditto | 114 | 13 | 96½ | 10 6 0 | ditto | 94 | 9½ | 99½ | 7 9 6 |
| ditto | 110 | 13½ | 96 | 10 7 0 | ditto | 86 | 10½ | 98 | 7 16 0 |
| ditto | 106 | 12¾ | 96½ | 10 1 0 | Knockmahon | 113 | 8½ | 97½ | 6 8 0 |
| ditto | 93 | 13½ | 95½ | 10 12 0 | ditto | 76 | 16½ | 91½ | 12 10 0 |
| ditto | 111 | 21¾ | 88¾ | 17 1 6 | Copiapo | 95 | 28 | 89½ | 22 15 6 |
| ditto | 91 | 22¾ | 89 | 17 19 6 | ditto | 90 | 28½ | 87½ | 23 1 0 |
| ditto | 82 | 22½ | 89 | 18 2 6 | Ballymurtagh | 50 | 4½ | 118 | 3 7 0 |
| ditto | 81 | 22½ | 87½ | 17 15 6 | ditto | 45 | 4½ | 122½ | 2 19 0 |
| ditto | 57 | 23½ | 87½ | 18 2 0 | ditto | 36 | 5½ | 113½ | 3 19 6 |
| ditto | 51 | 22½ | 88½ | 17 6 0 | Zew Zealand | 33 | 14½ | 92 | 11 2 0 |
| ditto | 109 | 12¾ | 94½ | 9 16 0 | Holyford | 22 | 24¾ | 88½ | 19 12 6 |
| Berehaven | 125 | 9¾ | 99¾ | 7 9 6 | Canadian | 1 | 7½ | 105 | 5 7 0 |

TOTAL PRODUCE.

| | | | | | |
|---|---|---|---|---|---|
| Cobre | 1120 | £15062 6 6 | Ballymurtagh | 131 | £443 7 0 |
| Berehaven | 411 | 3131 19 6 | New Zealand | 33 | 366 6 0 |
| Knockmahon | 189 | 1673 4 0 | Holyford | 22 | 431 15 0 |
| Copiapo | 185 | 4238 2 6 | Canadian | 1 | 5 7 0 |

Total tons, 2092.—Total amount, £25,352 7s. 6d.

Copper ores for sale June 10.—Cobre 107, ditto 106, ditto 100, ditto 98, ditto 94, ditto 59.—Cuba 80, ditto 79, ditto 66, ditto 43, ditto 19.—Burra Burra 81, ditto 56, ditto 54, ditto 46, ditto 45.—Copiapo 89, ditto 80, ditto 48, ditto 33.—Berehaven 97.—Holyford 77.—Llandudno 50, ditto 25.—Ballymurtagh 69.—Burra Burra 23, ditto 10.—1734 tons,

## COPPER ORES

*Sampled May 12, and Sold at Pearce's Hotel, Truro, May 27, 1847.*

| Mines. | Tons. | Price. | Mines. | Tons. | Price. |
|---|---|---|---|---|---|
| Consolidated | 108 | 7 3 6 | South Caradon | 116 | 5 2 6 |
| ditto | 96 | 4 3 6 | ditto | 94 | 9 4 0 |
| ditto | 93 | 8 8 0 | ditto | 91 | 5 18 6 |
| ditto | 90 | 6 10 0 | ditto | 55 | 9 3 6 |
| ditto | 79 | 8 9 6 | ditto | 33 | 5 3 6 |
| ditto | 75 | 2 4 6 | Treviskey | 113 | 6 18 6 |
| ditto | 67 | 5 9 0 | ditto | 76 | 5 5 0 |
| ditto | 66 | 3 9 0 | ditto | 66 | 8 1 6 |
| ditto | 63 | 5 13 6 | ditto | 60 | 11 17 0 |
| ditto | 57 | 4 18 0 | ditto | 54 | 4 14 6 |
| ditto | 43 | 3 19 6 | Wh. Comfort | 78 | 3 16 6 |
| ditto | 32 | 2 6 6 | ditto | 76 | 2 14 0 |
| ditto | 21 | 3 16 0 | ditto | 61 | 2 14 6 |
| ditto | 15 | 4 5 6 | ditto | 40 | 2 13 6 |
| United Mines | 121 | 6 15 0 | Trethellan | 61 | 2 18 0 |
| ditto | 115 | 6 12 0 | ditto | 60 | 2 8 6 |
| ditto | 106 | 4 3 6 | ditto | 59 | 4 19 0 |
| ditto | 101 | 3 19 0 | ditto | 40 | 1 5 6 |
| ditto | 80 | 4 11 6 | ditto | 18 | 2 15 6 |
| ditto | 76 | 4 6 6 | Treleigh Consols | 117 | 13 10 6 |
| ditto | 75 | 4 16 0 | ditto | 92 | 4 1 0 |
| ditto | 69 | 3 7 0 | ditto | 27 | 3 16 0 |
| Tresavean | 78 | 2 9 6 | St. Aubyn | 59 | 2 7 0 |
| ditto | 75 | 2 9 6 | ditto | 51 | 7 5 0 |
| ditto | 74 | 4 11 0 | ditto | 43 | 5 11 0 |
| ditto | 73 | 5 1 6 | Grambler | 41 | 3 15 6 |
| ditto | 69 | 3 6 6 | Par Consols | 79 | 6 4 0 |
| ditto | 62 | 5 1 0 | ditto | 61 | 4 19 0 |
| ditto | 46 | 6 9 6 | Wh. Sisters | 87 | 7 8 0 |
| ditto | 37 | 2 14 6 | ditto | 46 | 4 1 0 |
| ditto | 21 | 1 9 6 | Wh. Ellen | 90 | 6 11 0 |
| Perran St. George | 57 | 2 16 6 | ditto | 10 | 4 6 0 |
| ditto | 51 | 2 7 6 | Ting Tang | 65 | 4 8 6 |
| ditto | 46 | 6 6 0 | ditto | 31 | 3 11 0 |
| ditto | 43 | 2 12 0 | Wh. Clifford | 82 | 4 19 0 |
| ditto | 42 | 3 11 6 | ditto | 13 | 3 7 0 |
| ditto | 40 | 3 12 0 | Wh. Andrew | 43 | 6 4 6 |
| ditto | 36 | 3 9 0 | Nangiles | 17 | 4 1 6 |
| ditto | 15 | 4 18 6 | ditto | 12 | 5 11 6 |
| ditto | 14 | 6 13 0 | Barrier | 71 | 4 3 6 |
| Bolenna | 41 | 3 6 6 | Budnick | 24 | 5 15 6 |
| ditto | 21 | 8 1 6 | Wh. Prudence | 13 | 5 5 0 |
| | | | Wh. Catherine | 11 | 6 1 6 |

TOTAL PRODUCE.

| | | | | | |
|---|---|---|---|---|---|
| Consolidated | 905 | £4997 4 6 | Grambler & St. Aubyn | 194 | £900 16 0 |
| United Mines | 743 | 3703 2 0 | Par Consols | 140 | 791 15 0 |
| Tresavean | 535 | 2058 0 6 | Wh. Sisters | 133 | 830 2 0 |
| Perran St. George, Bolenna, Wh. Leisure | 406 | 1573 19 6 | Wh. Ellen | 100 | 632 10 0 |
| | | | Ting Tang | 96 | 397 13 6 |
| | | | Wh. Clifford | 95 | 449 9 0 |
| South Caradon | 389 | 2673 17 6 | Andrew & Nangiles | 72 | 403 17 0 |
| Treviskey | 369 | 2680 12 6 | Barrier | 71 | 296 8 6 |
| Wh. Comfort | 255 | 776 15 6 | Budnick | 24 | 138 12 0 |
| Trethellan | 238 | 715 8 0 | Wh. Prudence | 13 | 68 5 0 |
| Treleigh Consols | 236 | 2057 12 6 | Wh. Catherine | 11 | 66 16 6 |

Average Standard .......... £108 8 0 | Average Produce .......... 7¾

Average Price per ton .......... £5 5 0

Quantity of Ore .......... 5025 tons. | Quantity of Fine Copper, 369 tons 6 cwts.

Amount of Money .......... £26,213 17 0

LAST SALE.—Average Standard ...... £ 96 19 0.—Average Produce ...... 10

COMPANIES BY WHOM THE ORES WERE PURCHASED.

| | Tons. | Amount. |
|---|---|---|
| Mines Royal | 100 | £473 1 6 |
| English Copper | 584 | 3245 12 6 |
| Vivian and Sons | 1173 | 4203 5 4 |
| Freeman and Co. | 608 | 2993 16 1 |
| Grenfell and Sons | 965 | 5550 6 0 |
| Sims, Willyams, and Co. | 817 | 4290 5 0 |
| Williams, Foster, and Co. | 774 | 5448 10 7 |
| Total tons | 5025 | £26,213 17 0 |

Copper ores for sale on Thursday next, at Tyack's Hotel, Camborne.—Mines and Parcels.—Wheal Seton 636—Camborne Vean 558—East Wheal Crofty 553—Tincroft 418—Dolcoath 384—North Pool 340—South Wheal Basset 271—Fowey Consols 247—Condurrow 212—South Wheal Francis 162—East Pool 105—Wheal Bucketts 102—Lanivet Consols 100—Hanson Mines 52—East Seton 44—Godolphin 33—Tretoil 25—Wheal Ruby 18—West Basset 15—Wheal Buller 6.—Total, 4281 tons.

Copper ores for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and Parcels.—Carn Brea Mines 843—Wheal Prosper 347—United Hills 251—Par Consols 234—Wheal Tremayne 137—Wheal Rodney 115—Trenow Consols 62—Wheal Agar 50—Wheal Jane 48—North Wheal Basset 44—West Wheal Treasury 43—Wheal Virgin 42—Bastian's Ore 30—Redruth Consols 30—Carn Perran 28—Wellington Mines 27—Michell's Ore 19—Harvey's Ore 6—North Wh. Abraham 5—Wh. Prussia 3—Pembroke 1.—2365 tons.

## NOTICES TO CORRESPONDENTS.

It will at all times save much trouble, and frequently considerable delay, if communications are simply directed—

To the Editor,
*Mining Journal Office,*
26, Fleet-street, London.

Also, to avoid trouble, Post-Office Orders should always be made payable to William Salmon Mansell, as acting for the proprietors.

"Paris."—Received, charged 6s.; the request will be complied with.

Our readers should be careful in preserving their copies of the Journal, we having been unable to supply many calls for back Numbers, to complete sets. The paper should be filed regularly, so as the end of the year, a comprehensive Index, Title, &c., being given, a most useful and interesting volume is formed.

The Mining Journal is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all the news agents, at the Royal Exchange, and other parts of London.


# THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, MAY 29, 1847.


[Owing to a late press of matter, we are necessitated to postpone several of our leading articles—one on Accidents in Coal Mines—on the Falling of the Railway Bridge, &c.]

We have pleasure at the present time in referring our readers, and the public, to Mr. Motley's interesting letter, which we have inserted in another part of our Journal, on the subject of Wrought-Iron Bridges and Viaducts. His plan for supporting the road from below, as described by Dr. Lardner, appears to us to be very *simple, economical, and effective*, the support being contained in itself. Its effect is the same as a beam of timber pressing at the ends perpendicularly, on the points of support, similar to his arch suspension plan; and, therefore, as he observes, it is not endangered, or deranged, by a sinking of the abutments, or points, of support, thus materially reducing the expense of masonry in the construction of bridges. We, therefore, hope, as Dr. Birkbeck observes in the closing part of his letter, that "of the superiority of your project, I hope that engineers, and the public, will soon become fully sensible."

We have also seen a design of Mr. Motley's, which is to be submitted to the Emperor of Russia, for the construction of a suspension-bridge across the Volga, at St. Petersburgh, 1500-ft. span, with a draw-bridge in the centre, for the accommodation of internal navigation, and of which we shall give some particulars, with an illustration, in a future Number.

In our last Number we adverted to the establishment of the "British Mining Offices," as calculated to afford facilities to mine adventurers, as well as lessors of mineral property; and have much pleasure in finding that since its establishment, which may be said, so far as the public is concerned, to be only a week old, that several mines have been removed, or established, at the offices; and, moreover, that the directors, or managers, have succeeded in obtaining the services of an intelligent and practical miner, Capt. J. R. Clymo, formerly of Wheal Gill, South Caradon, and Wheal Concord Mines, having been appointed, to whom will be referred all matters connected with the practical working of the mines, and who will be required to make periodical visits, and report on the proceedings—thus affording a check on the agents; while, in two many instances, money has been expended by deputations of London committee men, who are ignorant of mining operations, and whose well-intentioned instructions have too frequently been the means of destroying the prospects which the mine fairly presented, and the expectations of the adventurers. We are glad to find this course pursued, as we may expect that honest and practical reports will be the result. Among the mines taken up, or conducted at the offices, we find those of the Gadair Mining Company, Wheal Barbara, and the Cascade Mining Company—in addition to which, we understand, others are about being added; while, from the proceedings of the Wheal Concord adventurers, reported in our columns of to-day, it will be seen that arrangements are contemplated, whereby the business of that mine will be removed to the offices of the British Mining Company, on the new shares being taken up, which, we understand, indeed has been resolved upon by the parties connected with the establishment to which we refer. We shall watch, with some interest, its progress and the course adopted; while, from the observation we have at present made, we augur well as to its success: there is, however, much to be done to secure confidence; and if the managers adhere to the rules they have themselves laid down, we doubt not but that such will be attended with beneficial results.

We are pleased to find, that his Majesty the King of the Belgians has done Mr. Weale, the scientific bookseller, of Holborn, the honour of presenting him with a splendid gold medal, in acknowledgment of his services, in publishing several elaborate scientific works, more especially the valuable papers of the Royal Engineers.

Discovery of Coal and Iron in the Island of Labuan.—By the last Indian mail we have been furnished with important intelligence, tender further to stimulate the expectations entertained of the growing importance and prosperity of our new acquisition, the Island of Labuan. On the adjoining coast of Borneo, extensive coal mines were known to exist; and as that part of the country is within the territory of Sarawak, and under the sway of Mr. Brooke, as rajah, there was every reason to rely that they would aid in no slight degree the future commerce of the archipelago. Fortunately, however, this advantage now promises to be superseded by another of greater magnitude, since we are informed of the discovery of a large seam of coal on the Island of Labuan, and, consequently, in our possession. An opportunity has just been taken by Lieut. Heath, commander of the *Wolf*, to ascertain as far as possible the general products of the island, and among other results of his researches is the discovery in question. The seam commences at a distance of not more than 334 yards from the beach, and, what is of the utmost importance, in the neighbourhood of a bay where there is good anchorage and a sufficient depth of water to allow steamers of moderate draught to proceed close in shore. Much care was bestowed in ascertaining its direction, and it was observed at seven different places, the thickness being mostly about 10 ft. In trials made of the combustion of this coal it was estimated as about equal to Newcastle as regards heat and flame, but its consumption was more rapid. Situated near the same bay was a great number of camphor trees, which are described to be of the finest kind. There were also found large quantities of iron in its native state.

The Tin Trade—Mineral Resources of Malacca.—The rediscovery of Malacca by Europeans (for such in reality was the recent movement in England) appears to have awakened a new spirit of enterprise amongst the inhabitants, and to have opened their eyes to the value of the treasures which they have so long neglected. The Chinese miners, as if already feeling the presence of their great rivals from the west, and foreseeing that their monopoly must fall before their skill and combination, are eagerly extending their works. Four new mines have been opened within the last three months, and unless English capitalists bestir themselves in time, they may find all the best stanniferous valleys preoccupied. We believe the great mining associations of England have for some time had their eyes upon the peninsula. If they deliberate too long they will find the prize snatched from them. An American gentleman lately visited all the mines in the Malacca and in the Malayan States to the north and south; and as his report upon some of the localities where tin is now worked is very favourable, it cannot be doubted that the information which he has obtained will be duly appreciated by his enterprising countrymen, whose habit it is to pinage *in medias res*, whilst we sit weighing the pros and cons. It may give our Cornish readers some idea of the metallic fertility of Malacca if we state, that in one valley there are at this moment 30 mines in operation. Can it be doubted that the granitic hills at the head of this valley, the waters from which have strewed its whole length with tin sand, hold numerous rich veins? In one locality where the ground was first broken so recently as October last, there are now 1200 Chinese employed, and recent visitors state the ore to be so abundant that the miners have not yet had occasion to dig 6 ft. below the surface. The Chinese capitalists who have farmed the right of working mines in this locality from Government, have hired a considerable number of Chinese immigrants who lately arrived at Malacca. The energy which they are now displaying is sure to be rewarded by a handsome profit on their contract with Government. The revenue from tin is increasing so rapidly, that there is little doubt that ere long the entire loss upon the purchase of proprietary rights of the old Dutch landlords will be made up from this source alone. What has been considered an improvident measure will probably prove the means of placing Malacca in a position which she could not have attained if the avarice of numerous private local owners had been interposed between her resources and the enterprise of English capitalists. As it is, there are numerous tracts entirely at the disposal of Government, and the very great encouragement which they have given to the intending sugar planters, and the promptitude with which the ground applied for by the Malacca Sugar Company has been examined and surveyed, afford an ample guarantee that every well-considered and substantial project, tending to the improvement of the country, will be most favourably and liberally countenanced. If any additional motive were wanting for speedy and decided measures being taken by all who have any intention of entering on this new field, whether for the cultivation of the sugar cane, or to working of tin, it may be found in the fact, that our present governor, Col. Butterworth, is animated by a cordial zeal for the advancement of these settlements, and would, we are sure, give the most effective support to any association of respectability that may be organised for either of these purposes.

## PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

I have been favoured with a copy of the report of the directors of the Compagnie des Mines de la Loire, which was read at the last general assembly. It states that the agreement entered into for taking on lease the St. Etienne and Lyons Railway had been annulled, on account of the shareholders of the latter having refused to sanction it. It says, that the directors have not thought right for the present to take measures for working the company what is called a *société anonyme*. The purchases of concessions, &c., rendered it necessary to borrow 40,000*l.* for a year, at 5 per cent., by means of 717 obligations, similar to those of 1845; and the directors demanded and obtained a continuance of their powers to raise more money. At the beginning of 1846, the number of shares was 56,730; since which it has been increased to 9219 shares, owing to the coal mines of other companies having been purchased either wholly, or in part, by it. Among the purchases so made in 1846, were a number of shares of the Company de la Roche la Molière and Firminy, and the whole of the concessions of La Berandiere, Vercheres, Villards, Chisel, Berard, together with 4368 shares of the Canal de Givors. In addition to the 65,949 shares thus existing, the company expects an addition of 4991 shares, in the event of the negotiations for the partial or total purchase of the concessions of Vercheres, Chantegrame, Chana, and Chaney being completed. The amount obtained directly from the mines in 1846 was 3,154,193 fr. 57 c.; and from other sources, 3,054,193 fr. 57 c.; the exponses were 1,853,332 fr. 70 c.—thus leaving a profit of 2,271,648 fr. 4 c. In addition to this large balance, the company received 169,541 fr. 92 c. from the premiums of 20 fr. per share paid by new shareholders, pursuant to an arrangement made with the Company of the Mines Reunies; this amount has been carried to the reserve fund. The company has also to receive a very considerable balance coming from the winding-up of the affairs of the Company of the Mines Reunies; but at present the amount cannot be ascertained. It also will be carried to the reserve fund. The company had to incur an expense of 126,720 fr. 80 c. for extraordinary expenses, arising from the necessity of finding stock, &c., for the better working of the pits, and from other causes; this it proposes to pay off by a sinking fund of 20 per cent., so as not to let all the burden fall on one year. The cost of constituting the company was 130,624 fr. 59 c.; and the directors propose to pay that off by annual instalments of 10 per cent. Their accounts then stand thus:—profits, 2,271,684 fr. 4 c.—Sinking fund of 20 per cent. for extraordinary works, 25,344 fr. 16 c.; ditto of 10 per cent. for expense of constituting the company, 13,602 fr. 45 c.: 38,946 fr. 61 c.—Remains to be divided, 2,232,701 fr. 43 c. The number of shares entitled to a share of the profits of the whole year is 63,533; and the number entitled to share from 1st of July is 400; the directors, consequently, fixed the dividend for those two batches of shares at 35 fr. for 1846, from which must be deducted 20 fr., paid on account in October last. The 63,533 shares will require, for the payment of this dividend, 2,223,685 fr.; and the 400 shares, 7000 fr., which several sums being deducted from the 2,232,701 fr. 43 c. net profit, leaves a balance of 2046 fr. 43 c. to be carried to the reserve fund. The report says, that the reason why the operations of 1846 had not the importance that might have been expected is, that the materials which the company had to employ were extraordinarily dear, and that it had a great many improvements to make. The directors, however, speak in high terms of the prospects of the company; and they boast of what they have done for the miners. Respecting the attacks, of which the company is the object, they say—"Without doubt, the efforts of the board have not yet been able to put an end to the attacks against the company. Still it feels itself warranted in considering the legality of the organisation of the company as out of the reach of all discussion; and it entertains the hope of making every impartial mind partake its conviction, that the creation of a great company in the basin of the Loire, was a matter of imperious necessity for the preservation of the coal beds, and that nothing else could offer such satisfactory guarantees to consumers and workmen."

A petition to the Chamber is in course of signature at Rouen, praying that the duty on foreign coal imported by sea may be reduced to the lowest rate of duty at present levied on coal imported by land. The reason of putting a heavier duty on coal by sea, than on coal imported by land, is, of course, done to spite England; but, in so doing, the French, like many other spiteful people, act as wisely as the man who cuts off his nose to be revenged on his face. For the fact is, that they suffer 10 times more from putting an excessive duty on our coal, than we do from not selling so much as we should with a moderate duty. What matters it to Newcastle whether she sends to France a few hundred tons per annum, more or less? But it makes a great difference, indeed, to the iron-works, the manufactories, &c., of Normandy and the coast, to be deprived of the privilege of getting as much English coal as they possibly can require, at the most moderate duty. The French tariff is the largest piece of absurdity ever invented. If it were not, would it ever have dreamt of making a difference in the import duty of Belgian and English coal—of enabling the people of the departments on the Belgian frontier to get coal almost for nothing, and yet compel the people residing within reach of the sea, either to pay an excessive price for it, or to do without it altogether?

A letter from St. Etienne, now before me, denies that Messrs. Rothschild have entered into negociations for the purchase of the concessions of the coal mines of Firminy and Roche la Molière, as was lately stated. It sets forth also, that the shareholders do not demand 10,000,000 fr. or 15,000,000 fr. for the mines, but only 7,200,000 fr. The present produce of the pits enables a dividend of 90 fr. per share to be paid; but it is capable of being increased if the mines were properly worked.

The usual weekly letter from St. Dizier says, that the demands were very few, indeed; and that if a change should not occur, a decline in prices would be the consequence—in fact, offers had already been made by the travellers to sell at less than the last quotations, which were as follow:—*Fers laminés*, 380 fr. to 390 fr.; *fers battus à la houille*, Paris, 380 fr.—provinces, 390 fr.; *essieux bruts*, 385 fr. to 390 fr.; *essieux étampés*, 410 fr. to 415 fr.; *bandages peèrcs*, 410 fr. to 415 fr.

At the recent general meeting of the Company of the Hauts Fourneaux du Nord, the dividend of 1846 was fixed at 140 fr. A sum of 50 fr. has already been paid on account, and the remaining 90 fr. may be received from 1st June next.

The shareholders of the Fonderies et Houillères de l'Aveyron lately held their annual meeting—at which the accounts of 1846 were examined and approved, and a dividend of 500 fr. per share was declared. The report stated, that the company made in the course of last year 14,000,000 kils. of iron, and that it had constructed new furnaces, which will enable it to carry this year's production up to 20,000,000 kils.

The dividend of the Vieille Montagne Company is to be paid from 10th July next at Paris, Brussels, and at Angleur. It is fixed at 300 fr., which, added to 45 fr. interest, which was paid in January last, makes the produce of each share 345 fr. In addition to this, the shareholders received in January 100 fr. towards the repayment of each share, being the second instalment.

The iron works at Hayange have contracted for the supply of the rails, &c., to the Montereau and Troyes Railway. They have already delivered 3950 tons, and will be able to complete the delivery of the remainder before the end of August. Each rail is 5 metres long, which is larger than most rails in this country. The railway has also received 1500 tons of chairs, but is still in want of a large quantity. Several of its locomotives are nearly finished, and others are building.

There is nothing new respecting the Customs Bill; but the ironmasters are getting up a stout opposition to it. They have persuaded the Chamber of Commerce of Toulouse to declare against its provisions, relative to the admission of iron and copper; but, in so doing, the Toulouse people proved that they do not understand their own interests, or the interests of their country.

On the 26th June the Marine Department will receive contracts for the supply of 142,000 kils. of superior sheet-iron for Rochefort, of 150,000 kils. of French cast-iron for Toulon, and of 8900 kils. and 6600 kils. of steel for Cherbourg.

The following details, relative to importations, are extracted from a return just published by the Customs Department:—Imported into France during the month of April, 1847, 76,057 metrical quintals of cast-iron, 2,079,800 of coal, 903 of tin, 16,561 of lead, 13,563 of zinc, and 10,112 of copper. During the first four months of 1847, 1846, and 1845, the importations were as follows:—1847—coal, 6,296,636; cast-iron, 331,072; tin, 2605; copper, 27,751; lead, 37,688; zinc, 35,400: 1846—coal, 5,578,273; cast-iron, 245,872; tin, 2966; copper, 13,222; lead, 461,391; zinc, 10,866: 1845—coal, 5,030,920; cast-iron, 173,547; tin, 29,557; copper, 32,066; lead, 40,789; zinc, 18,688. You will not fail to observe the very remarkable increase, which, in spite of excessive tariffs, has taken place in the importation of coal and cast-iron.

A coal mine is said to have been discovered in the Neapolitan dominions of extraordinary richness and quality—the latter being described as equal to the Newcastle coal.—*Paris, Wednesday.*

Belgium.—Various modifications have been made in the statutes of the "Compagnie des Hauts Fourneaux de Monceaux," and sanctioned by Royal ordinance. The principal points of the statutes, as they now stand, are as follows:—The company is a *société anonyme*—the duration of it is 90 years 46 days, dating from 16th November, 1846—the company is to be at an end if half of the capital shall be swallowed up in losses, or whenever two-thirds of the shareholders, holding three-fifths of the shares, shall think right. The object of the company is the extraction of coal, the extraction of ore, and fabrication of iron and cast-iron, and the manufacture of machines, and different objects in view; the capital is fixed at 3,500,000 fr. (140,000*l.*); the persons who have given up to the company the buildings, lands, concessions, &c., have received 3000 shares of 1000 fr.; 500 shares have been subscribed for by bankers, and the directors may issue 500 other shares—thereby carrying the capital up to 4,000,000 fr. The directors may also contract loans to the amount of 1,700,000 fr.; the shareholders are not responsible for more than the amount of their shares; 5 per cent. is to be paid on each share every 1st of October, if the profits shall allow, and another dividend is also to be paid in April. A balance-sheet is to be drawn up at the end of every year, and the balance in hand is to be employed in payment of their dividends, after deducting 12½ or 14 per cent. for the directors, and 10 per cent. for the reserve fund, until the latter shall reach 400,000 fr. The affairs of the company are to be managed by five directors, and a managing director; it is to be superintended by five *commissaires*. The directors are to meet at Monceaux, or Bruxelles, at least once a month; directors and *commissaires* are to be nominated by the shareholders, but the Government may nominate a special *commissaire*, to learn the state of the company's affairs; the payment to each director is not to be less than 5000 fr., nor more than 12,000 fr. per annum. The managing director is to have from 5000 to 12,000 fr., with ½ per cent. on the profits; 1 per cent. of the profits is to be divided among the *employés*. The general assembly is to be composed of holders of at least 10 shares, and is to be held every year; and extraordinary general assemblies may be called at any time by the directors.

M. Nazelmackers, of Liege, and the Société de John Cockerill, at Seraing have demanded a concession of lead, zinc, and other mines at Angleur.

At the meeting of the shareholders of the Luxemburg Railway, held in this city on the 19th, the accounts were approved of, and the agreement of union with the Louvain à la Sambre Company was read, and generally approved of; but as there were not a sufficient number of shareholders present to ratify it, it was decided that another meeting should be called for 24th of June. The meeting also decided, that if the calls on shares be not paid up by 20th of June, the shares shall be sold.

The Government has approved, by Royal decree, the constitution of the Company of the Coal Pits of Picton, as a *société anonyme*; the capital is 1,200,000 fr., in 1000-fr. shares.

The coalowners of the Charleroi basin have chosen a list of candidates for the representation of the district in the Chambers.

The Minister of Public Works has refused the demands for concessions of coal in Romsée and Beyne-Heuzay.

The general meeting of the Company of the Courcelles Coal Pits, will take place the 26th of June.—*Brussels, Tuesday.*

## THE SULPHUR TRADE OF SICILY.

TABLE No. 1.

Showing the increase or decrease per cent. in the average exportation per annum of sulphur, from Sicily to foreign ports, during the latter of two nearly equal terms of years compared with the former:—

| | *Great Britain.* | *France.* | *Others.* | *Total.* |
|---|---|---|---|---|
| First Term—From Jan. 1, 1831, to July 31, 1838 | 397,625 | 330,006 | 84,223 | 811,853 |
| Second Term—From August 1, 1838, to Dec. 31, 1845 | 289,762 | 256,026 | 127,189 | 672,977 |

*Second Term*—Increase, 33 per cent.; decrease, 17 per cent.

TABLE No. 2.

Showing the quantities of sulphur exported from Sicily to all countries, from 1838 to 1845, under various rates of duty:—

| *Date.* | *Years.* | *Duty.* | *Total Cantars.* |
|---|---|---|---|
| 1839 | | 20 tari | 347,125 |
| 1840 | | 20 „ | 683,180 |
| 1841 | | 20 „ | 187,101 |
| 1142 | 1st to 31st January | 20 „ | 4,185 |
| — | 1st February to 31st October | 8 „ | 317,649 |
| — | 1st November to 31st December | 2 „ | 180,676 |
| 1843 | | 2 „ | 1,081,415 |
| 1844 | | 2 „ | 833,701 |
| 1845 | | 2 „ | 720,172 |

TABLE No. 3.

Showing the quantities of sulphur exported from Sicily in 1846, distinguishing the countries principally concerned therein:—

| *Great Britain.* | *France.* | *United States.* | *Other Countries.* | *Total Cantars.* |
|---|---|---|---|---|
| 541,160 | 369,683 | 66,854 | 107,682 | 1,085,380 |

The foregoing tabular review of the Sicilian sulphur trade, affords an instructive illustration of the prejudicial influence exercised over commerce by heavy duties. It appears from these tables, that during the 7½ years, ended 1845, the average of Sicilian exports of sulphur to all countries fell off 17 per cent. compared with the average of the 7½ years, ended 31st of July, 1838. On the other hand, we find that the exports to all countries during the year, ended Dec. 31, 1846, reached a greater amount than they had ever attained before.

The cause of these fluctuations is to be sought in the export duty imposed upon sulphur during the second term of 7½ years. The duty commenced on the 1st of August, 1838, at the rate of 6s. 8d. per cantar, and put an entire stop to exportation for the rest of that year. In 1839, the total of exports did not exceed 347,000 cantars, whereas, previous to 1838, it had averaged 650,000. In 1840, the quantity increased to 683,000 cantars, but fell off again in 1841 to 187,101, and the exports of January, 1842, only amounted to 4185. During the next nine months of that year, the duty having been reduced to 2s. 8d. the cantar, the monthly exports increased at once from about 4000 to 35,000 cantars. On the 1st of November, 1842, the duty was further reduced to 8d. per cantar, and the monthly exports rose at once from 35,000 to 90,000 cantars. The exportation of 1843 continued at the same average figure. During 1844 there was a slight decline, though the exports continued at a higher figure than during the time of the heavy duty: this was owing to exporters being induced to hold back by the daily expectation of the entire removal of the duty; and the same stagnation, from the same cause, continued to prevail in 1845. At last, on the 31st December, 1845, the duty was abolished, and the shipments to all countries reached the unprecedented amount of 1,085,000 for the year.

There were circumstances attending the first imposition of this duty which we now gladly dismiss from our recollection. But the British capitalists, who have invested large sums in the Sicilian sulphur mines, and who were so seriously compromised at the first imposition of the heavy duty by the financial policy of the Government of Naples, cannot easily forget the spirit, determination, and success, with which Mr. MacGregor, now of the Board of Trade, fought their battle at that court.

We learn, under date Alexandria, May 9, that the works at the barrage of the Nile are advancing vigorously now that the river is low, and Mougel Bey, the chief engineer, has 12,000 men under his orders, working day and night. The men are at present principally employed in driving piles on the proposed lines across the river, and in this work they derive great assistance from the two new pile-driving machines, worked by steam power, which have been recently brought out from England. There is machinery of the value of 14,000*l.* sterling in daily use on the site of the barrage. The whole of this machinery comes from France, excepting the two pile-driving machines, and considerable jealousy has been shown against these by some unfounded reports which were spread about their inefficiency.

Discovery of Coal in Italy.—Operations have been recently undertaken in the Valley of Torrino, a province of the Abruzzo di Teramo, for the discovery of fossil coal. The depth of the excavation is at present 240 ft., but the workmen have not succeeded in discovering the desired carboniferous strata. The combustible materials, however, hitherto discovered, are of excellent quality, and containing hydrogen and carbon in abundance, with a small proportion of sulphur. The comparative tests applied, show that this material is not at all inferior in quality to the coal of Newcastle.—*Diario di Roma.*

Registration of Joint-Stock Companies.—It appears from a recent report of the registrar of joint-stock companies, that the number provisionally registered during 1846 was 292; of which 58 were for railways. The number completely registered was 112; of which 10 were for railways. The number provisionally registered, but not completely registered, amounted to 263; of which 50 were for railways. The total amount of fees received at the London office was 5157*l.* 8s. 10d., and at the Dublin office 214*l.* 9s. 11d.; total, 5371*l.* 18s. 9d.

Irish Railway Bills.—The promoters of Irish railway bills have no reason to complain of the facilities afforded to the progress of these bills. This session no fewer than 14 have already passed the committees upon merits in the Commons.

# Original Correspondence.

## WROUGHT-IRON BRIDGES AND VIADUCTS.

RESPECTED FRIEND,—Agreeable to my promise, I now proceed to give a brief history and detail of my several plans for wrought-iron bridges and viaducts. In the year 1827 I conceived that the principle of roofs of houses might be advantageously applied in the construction of bridges, by placing the support above the roadway in the form of an arch, and constructed a model for a bridge of the kind, on the scale of one-eighth of an inch to the foot, representing a span of 300 feet, showing the facility it afforded of making a footway, &c., over, and a carriage way under. This model I exhibited to a great many practical engineers and mathematicians, among others to the eminent Thomas Tredgold, Sir M. Brunel, Barlow, Bramah, Reine, Nicholson, &c.) to Dr. Lardner, Dr. Birkbeck, Davis Gilbert, Esq., president of the Royal Society, all of whom expressed entire approbation, and Dr. Birkbeck addressed to me the following letter:—

30, *Broad-street, June* 28, 1828.

SIR,—I have examined with great attention, and with great pleasure, your new suspension bridge; it is, so far as my acquaintance with these structures extends, original, and capable of sustaining, with greater firmness and stability, much larger weights than suspension bridges with inverted arches. It appears to me, indeed, to afford the fairest promise of obtaining, with the slightest materials and at the cheapest rate, all the advantages of these structures, so important in the internal arrangements of every kingdom. Of the superiority of your project I hope that engineers, and the public, will soon become fully sensible. I remain, very faithfully yours, GEORGE BIRKBECK.

Being in Liverpool some time previous to the opening the Liverpool and Manchester Railway, when I had the pleasure of accompanying George Stephenson, Esq., on the *Arrow* engine, on an experimental trip, the day following the first line of rails was complete to connect the towns, several weeks before the public opening, I explained to him my plan of what I termed the arch suspension, and he, like all others, confirmed the correctness of the principle; about the same time, I also explained to him my ideas of which I termed the self suspension—viz.: by reversing the principle of the bow and string, and supporting the middle by means of suspending bars from the ends of the road line to one or more supporting bars or pillars, attached to the horizontal, or road, line, which he also approved, and I made a model of it, which I exhibited to him, and others, at the office of Cropper, Benson, and Co., in Liverpool—an engraving and description of which was published in a Liverpool publication, and which Dr. Lardner inserted in his *Cyclopædia*, in the volume on *Iron and Steel*, in which he observes to this effect, "that bridges of a short span can be economically constructed on the principle, cannot be disputed; how far it can be applied to bridges of considerable span, must be left for practical engineers to determine." About the year 1832, being at Newcastle-upon-Tyne, I endeavoured to prevail upon the directors of the Newcastle and Carlisle Railway Company to adopt the plans; and at length so far succeeded, as to induce them to allow a foot bridge, on the bow and string principle, to be made—the iron for which was furnished by Messrs. Losh, Wilson, and Bell, who directed a Mr. Robert Wilson, an engineer, to construct it under my direction. I proposed to submit it to the trial of a load of 5 tons, which was deemed to be sufficient; it was, I think, about 28 ft. long, and 5 ft. wide, weight of iron about 15 cwts. In a few days it was put together, and the trial of its strength was made with 5 tons, as proposed, which it sustained with perfect firmness, to the surprise and satisfaction of all present: finding it so firm, we then doubled the load, which it sustained till the following day, without producing any derangement of its parts. I left Newcastle soon after; but what was done with, or what became of, the bridge, I know not, as I never heard anything more of it from that to the present time.

The principle, or method, of this plan is, as T. Trodgold described it, *a most valuable one*, especially where the construction of abutments are expensive, or when abutments may be liable to sink, as a *slight sinking or settlement would not at all endanger or derange the structure*, which is an important consideration. It has afforded me much satisfaction, to find that the principle is about to be fairly tested over the River Tyne at Newcastle, under the direction of the eminent engineer, Robert Stephenson, Esq., on the upper part of which he proposes to convey the railway, and the lower, or under, part for a carriage and footway, which, I have not the least doubt, will completely establish its great superiority over the ordinary suspension bridges with inverted arches. In 1833, I proposed a similar plan for a bridge over the Thames, from near Charing Cross to King's Arms Stairs—a large model of which, on the scale of 1 inch to the foot, showing a span of 200 feet, I made, and exhibited for a considerable time, by permission of Lord Lowther, then Commissioner of Woods and Forests, in one of the void houses in the Strand, previous to the improvements. I proposed to construct it in three spans—viz.: a centre span of 400 feet, and two side spans 300 feet each—along the top of which I proposed an arcade of shops, with a carriage and footway under—a large engraving of which (made at the time) I enclose you for the inspection of such of your readers, or acquaintance, as may be desirous of seeing it—but, on account of its novelty, I could not succeed in getting the plan adopted, notwithstanding the high testimonials it received, and favourable notice by the *Times*, and other daily papers. Among the eminent individuals and mathematicians, who did me the favour of inspecting the model, were the Marquis of Lansdowne, Lord Auckland, the late Bishop of Ferns—the latter expressed himself in glowing terms of approbation, and stated that he should have much regretted returning to Ireland without having seen it, and I received letters from him after his return, expressing his entire conviction of its superiority over the ordinary suspension bridges.

With respect to my plan, as proposed at Clifton, that was so fully described in your last publication, as to render further observation thereon unnecessary: I will, therefore, proceed to describe what I term a bar suspension—a bridge on which principle was erected in 1837, agreeable to my plan, and under my inspection, over the River Avon, at Twerton, near Bath; and if any of your readers ever visit Bath, and be interested in such matters, let him, or them, go and stand on it *whilst a load is passing over it*, and then do likewise on another bridge near thereto, called the Victoria Bridge (Dredge's patent), and I think he, or they, will not be long in deciding upon the vast superiority of the former *in all respects*.

This bridge, &c. (an engraving of which appeared in your Journal of 25th March, 1843), is the first of the kind ever constructed. The span of the middle compartment is 120 ft., from centre to centre of the pyramids; the land ends are about 55 ft. each, making the whole length of the bridge 230 ft. The road-way is, 14 ft. wide between the suspending bars. The four pyramids are placed each pair on a concrete foundation, 12 ft. by 22 ft., 16 ft. deep on one side, and 9 ft. on the other side; the concrete rests on a firm stratum of clay. The pyramids are each composed of six courses of Bath stone, 2 ft. 6 in. deep, containing two blocks in each course. Their dimensions are—base, 5 ft. 6 in. by 4 ft. 6 in.; 3 ft. by 2 ft. 6 in. They are covered with a capping, as shown in the drawing. At the base of each pyramid, level with the lower part of the beam of the bridge, is a large cast-iron bed, secured by holding-down bolts inserted into other cast-iron plates in the foundation. In the centre of the large plate is inserted an iron bar, 3 in. by 1 in., which passes up the centre of the pyramid to a cast-iron plate at the top, to which it is firmly secured. The suspending bars are 2 ft. 6 in. apart, and the space between their points of attachment to the bridge about 9 ft. 3 in. The substance of these bars averages full 2 in. by 1 in.; they are welded in entire lengths, and connected on each side of the pyramid by two bars, 3 in. by half an inch, passing through the pyramid, bent in the direction of the strain, and fastened to the suspending bars by gibs and keys. On each side of the pyramid is inserted a cast-iron plate, from the base to the top suspending bar, cast with holes, through which these connecting bars pass.

The beam is composed of two bars of wrought-iron, 7 in. wide, by $\frac{5}{8}$ths thick, in lengths of about 18 ft., each properly arranged so as to break the joints, and are connected by brace plates. At the edge of each suspending bar which connects with the beam of the bridge is welded an upright piece of iron, about a foot long, of the same substance as the upright supports, $1\frac{1}{4}$ by 1 in., and to this the upright supports are attached by coupling joints. In the uprights are made proper eyes, through which the suspending bars pass, and are made tight by a wedge in the eyes above and below the bar, and covered over with a cast-iron rosette. Each suspending bar is attached to a round iron bolt, 2 in. diameter, which passes transversely to connect the two ribs or beams. At the land abutment the rib, or beam, is secured to cast-iron chairs, held down by strong iron bolts, and firmly secured to cast-iron plates, inserted in the foundation. The diagonal railing on each side of the bridge is filled in with upright round bars of iron, 1 in. diameter, about 6 in. apart—which are omitted in the drawing, to prevent a confusion of lines. The weight of wrought-iron in the suspending and upright bars is about 7 tons; the whole weight of wrought-iron, including transverse bolts, beams (or ribs), foundation plate bolts, railings, &c., about 18 tons; and of cast-iron about 5 tons. The floor is composed of Memel joists and oak platform. The joists are 12 in. deep by $3\frac{1}{2}$ in. thick, bevelled off on the top from the centre to 10 in. at the ends; the flooring boards are about 9 in. wide, and $2\frac{1}{2}$ in. thick, and are covered with a thick coating of coal-tar and sand. The following was the mode of construction adopted:—The land ends of the bridge were first erected; the middle portion, over the towing-path and river, was constructed by means of a platform, or hanging scaffold, suspended horizontally, by means of ropes and pulleys, from the top of the pyramid. This platform was chained to the iron-work, as it extended out, so that the bridge was carried over the river without any support from beneath.

I think it may be stated, *without fear of violating the truth*, that this is the *firmest suspension of its dimensions in the world*, which is the opinion of most, if not all, scientific persons who have seen it. Should any of your readers, or the public, be desirous of further information, I shall be happy to render all that may be conveniently in my power, being desirous of seeing all, or any, of the plans adopted, although I may not be pecuniarily benefitted thereby.—THOMAS MOTLEY: *London*, 5 *mo.* 25.

## STEAM-ENGINES.

SIR,—In your report of the proceedings of the Institution of Mechanical Engineers at Birmingham, in last week's Journal, mention is made of a paper, by Mr. F. Wilkinson, upon the effects of mixing heated air with the steam in boilers used for steam-engines. I beg to state, that the method of injecting atmospheric air into, and mixing the same with the steam of a steam-engine boiler, is claimed in Mr. John George Bodmer's patent, sealed on the 3d of July, 1844. A paper by Mr. J. G. Bodmer was also read at the Institution of Civil Engineers on the 24th of June, 1845, in which the method of mixing heated air with the steam, for the use of steam-engines, is explained at some length, and the results of a number of calculations, relative to the application of the said method to condensing engines, furnished. Had any members of the Institution of Civil Engineers been present at the meeting of mechanical engineers, they would, no doubt, have done Mr. Bodmin the justice to bear witness to the priority of his invention, or discovery. May I request the favour of your inserting this communication in one of your early publications. C.

*Manchester, May* 26.

## EAST OF SCOTLAND MALLEABLE IRON COMPANY.

SIR,—There was published, in a recent Number of your excellent Journal, a letter from Mr. Beveridge, of Inzievar, containing several charges against the chairman of the East of Scotland Malleable Iron Company. These charges are not consistent with truth; and they would have been noticed ere this, but for the fact, that a meeting of the Glasgow shareholders was called for, and held on last Wednesday, and it was advisable to embody their opinion on the negotiations in the reply to these statements. They are men who do not permit mere politics to interfere with their business; and, therefore, they were decidedly favourable to the course recommended by the chairman of the company, and unanimously opposed to that promoted by Mr. Beveridge. You will find the resolutions of the meeting in the *Glasgow Herald* of 24th May. It may be generally assumed that, when a controversialist adopts low and abusive language, there is something wrong with the cause that he has in hand; and, judging from Mr. Beveridge's pamphlets, it is evident that he finds himself in that predicament. Mr. Beveridge denies what Mr. Alison did not assert, that he had offered his mines of Knockhill to the Malleable Company. All that Mr. Beveridge appears to have done in that matter was to express an intention, which certainly looks very like an offer; it may be found in Mr. Beveridge's second letter, page 5, in the following terms:—"I told you I was determined, if I saw no other way of defeating your proposals, to come forward and offer to furnish the Malleable Company with works in every respect as complete as those of the Forth, and with a field far larger in extent, and more easily worked, for only 50,000*l.* less than you (Mr. A.) were asking." The offer, as it stands, is more easily made than fulfilled—indeed, I may say, it is altogether visionary—still it is a very modest and disinterested suggestion for such an earnest friend of the company to make, as its adoption would only leave him a profit of 50 per cent. Without the outlay of a shilling on the works, or the risk of a single penny, only fancy a briefless lawyer with 50,000*l.* in his pocket. The Forth Company offer to guarantee the cost of the iron at their works. Did Mr. Beveridge make any offer of this kind? Is he prepared to make any such offer now? If not, there can be no comparison between his hill of minerals and the Forth furnaces and fields in full operation? Mr. Beveridge next denies that he ever said the Forth Company were selling their works too cheap: but Mr. Beveridge never should write pamphlets; for, in his second letter, page 6, he said—"I am astonished at the liberality of their (Forth Company's) offer—they should ask, at least, 100,000*l.* more." Is not this saying that the Forth Company were selling their works too cheap?—aye, he even tells us how much they are too cheap. Mr. Beveridge may strive to twine himself out of the matter, by saying that his statement was conditional. The quibble would smell more of the law, than of something else with which he was once acquainted; but in this he will not succeed, as Mr. Alison offered at the time to give the guarantee required by Mr. Beveridge. Mr. Beveridge calls the proposal for amalgamation a job—if he had called it a political job, on the part of the opposition, I believe he would have been correct—the meeting of Glasgow shareholders calling it the only arrangement that can save the company. How can making an offer to a company, which they can either accept or reject, be a job, especially when the party making the offer refused to vote at the meeting called to decide the matter?

Mr. Beveridge moreover says, that it will be a fortunate job for Mr. Alison, who is to clear a large sum by the job, though that gentleman, from anything I can see, is as likely to lose by the transaction, since the Forth Company are not to be paid in cash, but in stock of the Malleable Company taken at par—a stock which is presently selling at a serious discount. Again, Mr. Beveridge says, that Mr. Alison bought up shares to swamp the shareholders, and carry matters his own way. The best answer is, that Mr. Alison refused to vote at all. There are some things, however, very like a job in the transaction; and one of them is the attendance, speaking, and voting of Mr. Beveridge at these meetings on shares so few, that they have cost him less money than his printer's account for hand bills and travelling expenses, connected with his exertions for the good of the Malleable Company. There is a philanthropist for you! Perhaps, also, the delay in presenting the engineer's report, which was supposed to be adverse to Mr. Beveridge's views, was also a job.

Undoubtedly, Mr. Beveridge and his brother's appearance in the matter, is a very gross political job. Mr. Alison is one of the candidates for the representation of Dunfermline. The Messrs. Beveridge are strongly interested for another candidate—Mr. J. B. Smith being well known as the nominee of Mr. E. Beveridge. Everything, of course, is fair in warfare; but it is an unhappy matter that these gentlemen, by purchasing five shares, more or less each, of a stock on which only 2*l.* 10s. has been paid, can convert a very promising company into a committee-room, or a debating society, for political ends, at the cost of the shareholders.

The prospects of our Malleable Company are certainly not in the meantime inviting. The Forth Company are more than indifferent to the proposed arrangement, although it is to be hoped that Mr. Alison, our chairman, being also connected with the Forth Company, may be the means of yet bringing about the union of the two companies, which the shareholders in this quarter consider to be of great importance to the Malleable Company. The Forth Company offered to exchange works in operation at a fair value, to be proved by the valuation of engineers, to be appointed by the Malleable Company, affording a full supply of pig-iron for *thirty-seven* years to come, along with a full and perfect guarantee to the shareholders, not for cash, but for shares, in a new company, whose stock is now selling at 40 per cent. discount—an offer of which the share-holding public so judged, that since the negotiation was broken off at Dunfermline, the shares in the Malleable Iron Company have fallen 15s. each; while the stock of the other malleable iron companies have maintained their price—an offer which the Glasgow shareholders consider to be essential to the prosperity of the company; and I may add, an offer that never would have been refused by any shareholder who had paid the slightest attention to the merits of the case, but for the introduction of political differences by a party who has really no stake in the company, but who joined the company only a few days before the meeting, for the sole purpose of damaging Mr. Alison's standing with the electors. Our circumstances in the meantime are unfortunate, and evidence that politics, and the affairs of public companies, should never be mingled together, as no doubt they have been in this instance. I have no doubt, that if the public were certain of the amalgamation, with a guarantee of 10 per cent., being carried, that the stock would be selling at a premium, instead of 20s. discount. From this you may calculate our loss.—A SHAREHOLDER: *Glasgow, May* 26.

## ACCIDENTS IN COLLIERIES—GOVERNMENT INTERFERENCE.

SIR,—As the question regarding Government interference with the management of collieries has arrived at a stage sufficiently advanced, as to be submitted to Parliament by that popular representative, Mr. Duncombe, I think that a few extracts from the reports of the Government Commissioners, just published, upon the subject, will convey infinitely more weight than theoretic disputations; I, therefore, beg to present them without comment, leaving it to your readers to draw their own conclusions. These gentlemen, Sir H. De la Beche, Dr. Lyon Playfair, and Mr. Warrington Smith, were sent successively down to inspect and report after several of the colliery explosions, and these extracts show the result of their labours. The *first report*, arising out of a requisition from the Earl of Lincoln, was made on the 1st of June, 1846, after the explosion at Jarrow Colliery; and it not only communicates the details regarding that explosion, but also the explosion at Risca, in South Wales, which happened shortly afterwards, concluding the result of their labours in the following terms:—

"So various are the conditions under which collieries are, or can be, worked, that we would suggest for consideration, if legislative measures should be deemed advisable, and an extension of the principle, which regulates the employment of women and children in our mines, and the labour in our factories, be thought good, that effective discretionary powers should be vested in properly qualified persons, appointed in convenient districts—so that the needful adjustments to conditions may be affected, and no single system be attempted unapplicable to our collieries as a whole." "Jealous, as the coalowners should properly be, of any undue meddling with their collieries, it may, nevertheless, be true, that a judicious system of superintendence in a district, by which the proper ventilation of collieries, efficient knowledge on the part of subordinate agents, and proper punishment for foolhardiness, or carelessness, on the part of the colliers may be secured, would be of great advantage to them individually and collectively, and be the saving, not only of lives, but of much capital, securing them in the case of accidents from many an unjust accusation for neglect. On the other hand, careful, but not over-meddling, supervision would afford confidence to the colliery—proper persons being appointed as superintendents (and, if improper, their deficiencies will soon become apparent, and their removal the consequence). He would feel, that he has the advantage of the existing knowledge of the day, brought to bear upon the particular conditions under which the colliery in which he labours is worked. In some districts the working collier is far better informed upon the general principles which should receive attention than may be commonly supposed, and he would feel far more secure from danger than he now does, if assured that the State was not neglectful of his safety. Although several collieries in particular districts possess good plans and sections, and an inspection of such plans and sections afford a view of the system of ventilation and general mode of working adopted—this is far from being the case generally, and has been much regretted, alike by the enlightened coalowners and by the public; the importance of correct plans and sections, has been promptly pointed out, both by the Committee of the House of Commons, in 1835, and the *Report of the South Shields Committee* of 1843; indeed, the necessity of them is sufficiently obvious. Should the suggestion of a judicious system of inspection be considered worthy of consideration, the ready access to proper plans and sections of collieries, brought up to given times, would necessarily form a part of any general system of regulation. If correct (and power to ascertain that they were so, would be essential), they would at once disclose the system of working and ventilation adopted, and with information respecting the police regulations, and an account of the kind of lights employed, would at once afford a general view of the mode of conducting any particular colliery, and of the adjustment of the workings to conditions."

"It being considered that safety lamps, properly used, do effect much security in the working of coal, and in so many cases explosions do take place when they are not employed, it has often been suggested that the Legislature should compel the general use of safety lamps in coal mines; but, on the other hand, there are many collieries in which fire-damp never appears; and it would justly be considered a hardship in such cases to compel a precaution altogether unnecessary. We would suggest that it could not be considered unjust for the Legislature to compel the use of safety lamps in all fiery collieries; and, in the present state of the law of property, it might even be prudent to assume, that all collieries, in districts where explosions are frequent, are fiery—putting the *onus probandi* that they are not upon the owners of such collieries, if proved to the satisfaction of the inspectors that no reasonable danger was to be apprehended in the collieries under their charge, licence might be given to work with naked candles—this licence ceasing at short periods, but being renewable, on ascertaining that the conditions of the mine had not altered." "Careful investigations into the causes of explosions of collieries—only part of which arrest public attention by their magnitude—appear to have led to the very general conclusion, that the condition of our collieries is most unequal; while, in some localities, there is so little to improve, that it becomes subject of regret that such examples should not be generally followed—in others, it becomes matter of surprise how the works can be permitted to remain in so defective a state, seeing that the owners themselves suffer much loss thereby. "Under such a state of things, and considering the number of valuable lives annually lost by colliery explosions, the continued risk to which so many are daily exposed, the national injured sustained by the imprudent and careless mode of extracting coal in many localities, are often felt oppressively also by the parties engaged in colliery speculations, and that the workings for coal must be adjusted to local conditions. We are led to consider that these evils might be at least mitigated by the careful and judicious inspection of convenient districts by competent persons—the necessary funds to be raised from such districts by a very slight impost, not even exceeding one farthing on each ton of coal raised in it; and we believe that the cause of humanity, and the interests of the coalowners, will be alike benefitted by a well-considered legislative measure of this kind.—H. T. DE LA BECHE; LYON PLAYFAIR."

The next report is addressed to Sir George Grey, Bart., on the subject of the explosions at Oldbury, in Warwickshire, and Coppull, in Lancashire—date, Dec. 4, 1846: the conclusion of which is as follows:—

"Whatever the result of an investigation into the conditions under which these collieries are worked, and the means taken to meet them may be, we consider the case as one bearing out the views of restrictive precautionary measures, recommended by us, in our letter to Viscount Canning. Our opinions, as expressed in that report, are strengthened by further experience, that increased safety in working collieries would be obtained if a careful supervision were established by properly-qualified persons, who would be enabled to report whether the general principles, universally applicable to an efficient system of ventilation, were properly applied to the peculiar mode of working adopted in any district, and to prevent, as far as practicable, the danger arising from an improper use of light; and we would, considering the variable conditions under which the British collieries are placed, and the inapplicability of any fixed system of working to them all, earnestly solicit your consideration of the kind of supervision recommended in our letter to Viscount Canning, as the only means of mitigating the dreadful loss of life experienced in our collieries under existing circumstances.—H. T. DE LA BECHE; LYON PLAYFAIR."

The third report arose out of the explosion at Ardsley Main Colliery, near Barnsley, addressed to Viscount Morpeth, and bears date March 22, 1847; and having examined, in detail, the works, as well as various witnesses, they conclude their report in the following terms:—

"While we thus feel it a duty not to cast unmerited blame upon those in charge of this colliery, we cannot avoid stating, that the great and melancholy loss of life lately sustained, with all the circumstances which have come to light, in connection with it, must materially add to the conviction, as stated by one of us, in conjunction with Dr. Playfair, in a previous report, that viewing the various conditions under which the collieries of this country are worked, a system of inspection—one not over meddling, but, at the same time, securing the most effective ventilation, and the proper use of lights—should be adopted. We believe that this inspection, if rightly conducted, would be alike important to the employers and the employed; and when we reflect, that the men who labour in our collieries supply that great mass of fuel which not only contributes to the household comforts of so large a portion of the inhabitants of this country, but also to the means by which its wealth and resources are so greatly advanced, we cannot but conceive that arrangements for the safety of their lives form a fitting subject for national care and legislative provision. We would not unnecessarily appear to press the contribution of even so small a sum as one farthing on the ton of coal raised in our collieries, should this be thought too inquisitorial, though we have reason to believe that it would be cheerfully paid by many, and that the power of entering into a composition, would greatly remove difficulties on this subject; but should such, or any similar plan be adopted, we should anticipate not only that there would be ample provision for all the inspection required, but also that there would be a large surplus available for the formation of district schools, where those things so needful to the coal miner might be taught, and a considerable fund eventually established for the benefit of the widows and children of those who, notwithstanding all care, might still unavoidably perish from colliery explosions.—H. T. DE LA BECHE; WARINGTON W. SMITH."

The verdict of the jury upon this occasion runs as follows:—

"The jury are of opinion, that efficient regulations are not enforced in this district to prevent the use of naked lights in those parts of coal mines where inflammable gas is known to exist; and they are further of opinion, that the recurrence of accidents, involving so large a loss of human life, demands the immediate attention of her Majesty's Government, and would justify Parliament in framing such a code of regulations, as would give greater security to persons employed in mining operations."

In the above extracts, therefore, we have the most decisive testimony, which these distinguished gentlemen can give, regarding the propriety of a legislative interference; the patient and onerous examination of the cases attendant upon *four different explosions, in different parts of the country, and under circumstances* differing entirely one from another, have enabled them to acquire practical experience, and that practical experience has led them unhesitatingly to advise legislation; therefore, it is to be hoped, that the hon. Member for Finsbury will not allow the present favourable opportunity to pass unheeded, but will urge upon Parliament the prompt consideration of so laudable a subject. D.

*Newcastle-upon-Tyne, May* 26.

## IMPROVEMENTS IN SMELTING IRON.

SIR,—"A. Z." wishes for information respecting the best mode of erecting and working blast-furnaces for smelting iron, and alludes to improvements which have been accomplished in Derbyshire. I am not aware of any other improvement carried into effect in that district besides that of fan-blast; and recollect, that some four or five years ago, being at the engine manufactory of James Yates, Esq., near Rotherham, Yorkshire, his engineer, Mr. Ruthven, showed me a very complete set of fans, intended to blow a smelting-furnace, at Stavely Iron-Works, near Chesterfield—the principle of which consisted in conveying the blast of one fan into the centre of another, and so on, until the requisite density was attained. I have not heard how the plan succeeds in practice, but was much pleased with it at the time, on account of its simplicity in construction, and regu-

larity in working. Anxious to receive information respecting the above improvement, I, about three months ago, wrote to Mr. Ruthven, who had left, and gone to Newcastle. He appears, by his reply, to be very sanguine of the success of the principle of smelting by fan-blast, if properly carried out, and offered me his experience and assistance whenever I might be placed in a position to require them.

Mr. Yates has a patent for a foundry cupola furnace—by the use of which, a great saving of coke is effected; and about six years since, he had a conversation with me on the subject of applying the same principle to the smelting-furnace; believing he has not since carried out his speculations on this project, I do not consider myself at liberty to allude to it further. The late Mr. Moses Teague, of Coleford, took out a patent in 1833, for an improvement in the construction of the upper part of a smelting-furnace; and, as the term granted is now expired, I shall be happy to give any one interested a particular account of the same, or any other practical information connected with the iron manufacture, on receiving a letter to that effect.—J. WALKINSHAW: *Coleford, Gloucestershire, May* 21.

## HYPOTHESES ON IRON.

SIR,—Mr. Mushet says that—"White iron is a definite compound of pure iron and carbon—iron 97·26 + carbon 2·74; and it is produced when pure oxide of iron is first deoxidated, and then saturated with the vapour of carbon. After the point of saturation is attained, a carburet is produced, and the iron becomes a compound of white iron and grey, or carburetted iron." This is a truly strange definition of a definite compound, which, after all, Mr. M. states is not a compound; for, if carbon really combined with the iron, a carburet must be produced, which effect is stated not to take place until a certain time—whereas, it is well known, in all chemical reactions, that as soon as one body comes in contact with another, with which it can combine a portion of the body, which it is possible to form (in this case a carburet), is immediately produced; and, as more of one of the bodies is brought into action, so does more of the compound form. For instance, take five parts by weight of hydrogen gas, and add eight parts by weight of oxygen gas, and place the mixture, under such circumstances, that combination can ensue—the eight parts of oxygen will unite with one of hydrogen, and form nine parts of water; if, then, another eight parts of oxygen be added, another part of hydrogen will disappear, and another nine parts of water will form, and so on, until forty parts of oxygen have been employed, and the whole of the hydrogen have entered into combination, and formed water, or protoxide of hydrogen, no other action could take place.

On this view I will place the formation of white iron, as adduced by Mr. Mushet—first of all stating, that whenever carbon chemically combines with iron, or any other metal, the resulting compound is a *carburet*, in the same manner as a compound of iron with sulphur is a *sulphuret*, or of iron with phosphorus a *phosphuret*, and so on. Now, if we present carbon to iron, under circumstances favourable to their union, as we did oxygen and hydrogen, it will be quite evident that, as soon as combination ensues, a carburet of iron must be the compound formed, as was protoxide of hydrogen formed in the case I have just alluded to. Hence, white iron must be, as I have always contended, a true chemical compound of iron and carbon, or a carburet of that metal; and white pig-iron, as I also have contended, is a mixture of that carburet (the white iron of Mr. Mushet, the composition of which, as stated in that gentleman's communication, I do not consider correct), with an indefinite quantity of iron, just in the same manner as in the case of the hydrogen and oxygen, when only one or two eight parts, or equivalents, of oxygen were added to the five parts of hydrogen; we should have (supposing the water formed, to exist as steam) a mixture of steam, or protoxide of hydrogen, in the gaseous state; and hydrogen gas, which action is exactly analagous to the formation of white iron, or white pig-iron—the only cause in the differences observable in the composition of white pig-iron, is simply the varying quantities of definite carburet and iron existing in the samples examined; and grey iron differs from white, in possessing a portion of its carbon in the form of graphite. I, therefore, think I have proved, that it is a contradiction to suppose, that, no carburet of iron exists in white pig-iron; and that the white iron of Mr. Mushet is only the carburet, the existence of which I have so often urged; and that the grey, or carburetted, iron of Mr. M. is merely a mixture of graphite with the white pig-iron, as above constituted.

I cannot conceive that at any temperature produceable in a furnace, that iron is sensibly volatilised. Mr. Mushet will perceive, in my letter of the 17th, that I have both fused and cemented white iron in crucibles lined with charcoal, and that I have succeeded in converting the samples into grey metal; but yet, in both cases, they diminished in weight, fully bearing out that which I stated in my communication of the 10th; which, if Mr. M. had carefully read, and referred to the whole of that portion concerning grey and white pig-iron, he would have found that I came to exactly the opposite conclusion to that which the passage seems to bear by his interpretation.

It appears to me that Mr. Mushet has entirely mistaken my remarks as to the silicate of iron + lime, and, consequently, drawn an incorrect inference as to my knowledge of the nature of iron ores. I have never asserted that the iron ore, when introduced into the furnace, existed as a silicate of iron (although in many ores silicate of iron does exist)—I only stated that silicate of iron was present, not that silicate of iron was placed directly in the furnace; but I will maintain, until I see arguments sufficiently cogent to make me give up my position, that the chief use of lime in a blast-furnace is, as I have before urged, to prevent the injurious action of any silica that may be present—that is to say, either to decompose any silicate of iron naturally existing or afterwards formed, and, under certain circumstances, to prevent the formation of such a compound; and I, moreover, contend, that if to a silicate of iron, or, in other words, black glass of iron, carbon be added, and the whole heated to a proper temperature, little or no iron will be produced; but, if lime and carbon be added, a fusible silicate of lime will be formed, and then the carbon will have its usual reducing action on the liberated oxide of iron; and I also assert, that the mere presence of silica with oxide of iron at a high temperature, is sufficient to prevent the reduction of the latter, unless lime be present: I, therefore, entirely deny that silicate of iron can be metallised, unless lime or some other equally basic body be present—if it be, then the reduction will proceed as I have already stated.

As to Mr. Mushet's challenge concerning his question of the 8th, I can only state, I am arguing merely for the sake of truth, and not for the purpose of showing myself superior to any of my competitors (as throwing down the gauntlet would imply), or of urging my opinions in opposition to those of all men: I will now, for the above reasons, at once state that I have not seen, or do I see, sufficient experimental or theoretical grounds to attempt an explanation to Mr. Mushet's question, otherwise I should have answered it in my last letter; I am tempted to write this, in order to show Mr. M. that I am really acting as I have just stated, and that I am not ashamed of owning that I have yet very much knowledge to acquire, and I am also of opinion that it would have been much more in conformity with the true method of carrying on a scientific argument, to avoid all challenges of the kind alluded to (inasmuch as they are calculated to introduce the elements of ill-will); for it is quite evident, that if any one felt inclined to have answered the question proposed, he would have done so—and the fact of its not being answered, merely showed that no one was inclined to do so, or no one could—therefore, I cannot conceive the necessity of the challenge. However this may be, I much doubt if it can be at all answered in the present state of science; because, to answer such a question, it implies a perfect knowledge of all the actions and reactions taking place in the blast-furnace; and, if such knowledge were in the possession of any one, he would be enabled to provide such means as would allow the perfect working of all kinds of ores, cinders, refuse, &c., and also to provide against all bad qualities in the metal produced—so, from the very worst ores, to produce the very finest metal; and such a question as that Mr. Mushet has proposed, can, I think, only be answered by a similar course of experiments to that in which I am now engaged, and by which I shall be enabled to show the actual composition of all the substances employed in the blast-furnace, as also that of the products—so that, from the well-ascertained actions of one body or another, we shall be enabled to state exactly that which does take place within the blast-furnace, and I think not before—because it seems to me utterly impossible to ascertain any intimate reaction which is going on, without having the most complete knowledge of the nature and quantities of the substances engaged in that reaction or decomposition; as also a complete knowledge of the composition and properties of the bodies produced: if Mr. Mushet has that knowledge, he can at once answer his own question—if he have it not, he cannot, any more than myself, satisfactorily reply.

*Hawley-road, May* 24. JOHN MITCHELL.

## SIR C. LEMON AND FOREIGN ORES.

SIR,—Having waited with no small degree of impatience for a reply to Sir C. Lemon's letter, and being now highly pleased with its appearance, I lose no time in requesting space in your Journal, to urge on all Cornish miners the purchasing of both letters, that they may satisfy themselves as to which bears the stamp of fact and truth. Many will, doubtless, have possessed *that* by Sir Charles ere this—these, more particularly, I advise to read the other side; else, from the high character of the writer in Cornwall, it is to be feared that his letter may place them under very erroneous opinions, both as to the *facts* of the matter in question, and the *good faith* of the parties requiring the repeal of the duty. A general election has, probably, hurried Sir Charles into the publication of a letter on a subject for which his utter want of commercial and (in some respects) geographical knowledge renders him very unfit. His sweeping charges of "random statements," "arguments casting a shade on the good faith of the parties, and savouring of an intention to make you read in one sense what they have written in another," &c., &c., are not only boldly met and disproved, but, unless I greatly mistake, Sir Charles will find himself so saddled with the like things, and so unable to meet and reply to them, that he will begin to wish he could *still say* that "no answer whatever has been put in," or rather *attempted*; and if it were "not safe to leave any longer these arguments without some (implying a suspicion of his own fitness for the task) reply," I doubt its being safer now after the reply. The influential smelter, and the gentleman of the highest authority in United States' matters, must have been disposed to *quiet* Sir Charles, I imagine, seeing that he was the only leading Cornish man likely to oppose the free importation of ores. The British miner will do well to read a few lines in the 32d page of the *Reply*—in them, so far as he is concerned, is the whole matter embraced.—O. P. Q.: *Park-lane, May* 26.

## THE NATIONAL ECONOMIC GAS BURNER.

SIR,—Our attention has been called to a communication which appeared in your paper of the 1st inst., from Mr. W. Radley, ostensibly to criticise a small quotation from Sir H. Davy's works, used in one of our advertisements, but rather, as we think, to obtain by such means a *gratuitous advertisement* in your Journal, for a gas burner, which Mr. Radley says he has invented. With respect, Sir, to the said quotation (made by us at the time from memory only), if it be not correct (*ipsissimis verbis*), at least it is so in substance, and is confirmed by the statements of Parnell and other eminent writers, including even Mr. Radley; for you will see, by reference to his letter, that this gentleman has a most happy art of contradicting himself. Not wishing to take up more of your valuable space than we can possibly help, we will just advert, Sir, in a few words, to a subject that concerns Mr. Radley far more than the aforesaid quotation—we mean, of course, his gas burner, the merits of which he puts forth very strongly in the way of inference, by depreciating ours. He speaks of ours as a "speculative invention," the "unscientific adaptations" of which we are endeavouring to "father" upon the illustrious Davy. Sir, by a most whimsical contradiction (as usual) of himself, Mr. Radley puts in *his* claim also, though the father putative of "our" invention—the case, in fact, of a child with a plurality of fathers. "The deflection (?) in all its bearings (says Mr. Radley) claimed by Paul and Co., forms the principal feature of excellence in Radley's patent electro-thermic porcelain gas burner—that especially sub-denominated (?) the Argand plug burner is certainly the *prototype* of this one of Messrs. Paul and Co." Then comes the reproach of "fathering" the unscientific thing upon Sir H. Davy, &c. Mr. Radley is altogether too much for us; we should wish to retire, Sir, while we may, from a combat so perplexing and unequal—merely subjoining, that as often as we have occasion to call the attention of your readers to "our" invention, we shall be most happy to pay for the insertion of our advertisement; and we are proud to say, that the public, in very many instances, save us this expense, by kindly recommending our burners from one to another—no trifling testimony, we think, of the superior advantages derived from their use.—PAUL & Co.: *Leather-lane, May* 20.

## LAMPS!—LAMPS!

SIR,—It is no doubt a fearful thing to fall into the hands of a person whose "withers are unstrung;" but I am in no ways terrified—and, like "wolf," "wolf," in the fable, it has been so often repeated, as to cease to be appalling. Your correspondent accuses me of an act of *injustice*; while it is my province to forgive the rash expression, I cannot doubt that his "better part" will disapprove the accusation. I only know your correspondent to have been the author of lamps innumerable—all, I believe, abandoned in succession; I only know that the one tried before the Commons Committee proved a signal failure. I believe the *last* in order is that, where the wick flame is supplied with air from above, as in the lamp of Muesseler; my objections to it are simply those urged by the South Shields Committee. The closing paragraph would seem to imply that the workmen of the Jarrow Colliery should be *coerced* into the adoption of *this individual lamp*. Alas! Sir, you cannot compel conviction—even torture itself would fail in the ordeal—a "whip of scorpions" could neither compel conviction, nor impress belief. J. MURRAY.

*Portland-place, Hull, May* 25.

## THE SHIELD OF MICA.

SIR,—I simply proposed a concentric cylinder of mica to shield the flame from currents of air and lateral blowers, as an admirable substitute for the brittle material of glass, and for the very reasons which have induced your enlightened correspondent, Mr. Biram, to use a glass cylinder in his modification of the "Davy lamp"—now, Mr. Biram is both a scientific and a practical man. The plano-convex lens adopted by Mr. Biram was first applied by Mr. Francis Ellis, of Bath. My *firm conviction* is, that Davy's safety lamp, with the mica shield, is infinitely the best for all practical purposes whatever. I have already recorded my reasons—viz.: it is transparent, is flexible and elastic, and resists intense temperature, without foregoing its transparency. The *predilection* of mica for a deposit of soot is mere fable. What superior attraction for carbonaceous matter, chemical or otherwise, can a surface of mica have over a surface of glass? The phenomenon would, indeed, be a novelty in discovery!

*Portland-place, Hull, May* 25. J. MURRAY.

## FIRES ON SHIPBOARD.

SIR,—I was on board the *Vivid* steamer from London to Hull, on the 30th ult., when we descried in the distance a ship on fire—we bore down on the flaming wreck, if haply we might be able to render assistance, and were close by, when, at a quarter past five, p.m., she went down, and the burning brand was quenched in the foaming flood, and the sea wave closed over her for ever! We sailed over the ominous spot, among floating band-boxes and half-burnt bales of paper, &c.—the surface of the sea being obscured with soot. It was an impressive scene, and a spectacle ever to be remembered. The vessel proved to be the *Experiment*, screw propelled steamer, of Sunderland. My mind was forcibly led to the means of prevention of these terrible catastrophes, sufficiently fearful on land, but of terrific and terrible majesty at sea—assuredly, a *non-conducting material* should be interposed between the floor of the vessel and the sheet-iron which lines the space around the furnace; *dry sand* would be effective. I would recommend the entire interior of the vessel to be brushed over with a solution of "soluble glass" (*silicated potassa*), and, above all, those parts which are especially subject to the contingency of fire, such as the floor beneath the metallic lining; this would be an admirable safeguard, and one simple and inexpensive, as well as effectual. J. MURRAY.

*Portland-place, Hull, May* 25.

## STEAM APPLIED TO A BLAST-FURNACE.

SIR,—The account of the passage of steam into the blast-furnace, given by Mr. R. Mushet, is impracticable. Water regulators have the eduction-pipe inserted on the chest at some elevation above it; to produce what he asserts, his air-chest must have been filled with water, and some feet standing above its upper surface. I am not surprised he should have met with an increase of ridicule from all parties when he propounded those views; but I have elicited one fact, which I could not obtain last November, by direct inquiry. For the free oxygen theory, the engine was stated to deliver 4000 cubic feet of air per minute; the data attained by accident give now, with the usual practical deductions, less than 3000 cube feet per minute entering the furnace—so another phantom is dispelled. An attempt to discredit any one in a public journal, must fail, unless the party discredit himself. That Mr. R. Mushet's crudities and "*amplifications*" receive the sanction of his father, I cannot take upon his word. If they do, the conclusions of "Philo-Veritas" are correct. I have had, at intervals, pretty intimate acquaintance with Mr. Mushet, sen.; and he is a very altered man, if not displeased and annoyed, by such an interpreter. As a constant reader of your Journal, I cannot perceive the case where his signature has been "*assumed*." My queries respecting lime and silica are a transcript of Mr. R. Mushet's words, as may be seen by reading. I see no impropriety in possessing a work published undoubtedly for sale, nor the impertinence of quoting from it. If I possess 10,000*l.* a year by pirating inventions, the courts of law are open—such a loss is surely worth a trial of right. I should feel indebted to Mr. R. Mushet for this wealth, were not the gift a fiction—at least, if I know my affairs; still, I have not Mr. R. Mushet's penetrative power: I cannot see (as he presses to answer his question of the 8th of May) the interior of a blast-furnace through several feet of brickwork, nor perceive through the walls of a head what goes on inside, when writing contradictions. By what means are the "*semi-fused lumps*" withdrawn from the centre of the blast-furnace? I have not been used to wear that crown Mr. R. Mushet is anxious to confer; and I wish to understand what it means to say—in one line, "that he never saw a blast-furnace supplied with materials devoid of silica?"—and two lines on, to say he has seen "cast-iron made from materials in which not a particle of silica existed?—FERREUS: *May* 26.

## IMPROVED METHOD OF WORKING COLLIERIES.

SIR,—In regard to Mr. Darlington's letter of the 19th inst., proposing to accept my offer to work one or more of his collieries by my machines, I wish to state, that I have written to Mr. D. privately on the subject, with a view of gaining information relative to the said mines, so that we may have an opportunity of coming to terms. I consider, a correspondence, having for its object the negotiation of a private contract, can be of little or no interest to your numerous and intelligent readers. I have alluded to this subject here, merely to show, that I have not shrunk from my duty, when an opportunity offered, of carrying my "suggestions" into practice. Allow me to confess, that I have been somewhat misled in my calculations relative to the loss by the production of small coal in the Lancashire coalfield; I was partly guided in those calculations by a letter which appeared in your paper a short time ago; but being at Wigan a few days since on business, I visited several collieries in that neighbourhood, and soon satisfied myself of my error.

The late melancholy explosion which happened at Beeston, near Leeds, seems to have again raised the cry for the necessity of Government inspectors. That legislative interference, with the working and ventilation of our coal mines, would have a beneficial effect, few people will deny, provided any enactment for that purpose be judiciously applied, and confined within proper limits; but, to say that Government inspectors would prevent colliery accidents, is, in my opinion, an absurdity; to accomplish this, the great end of legislation in the matter at all, it would be necessary to appoint, as Mr. Mushet ably stated a short while ago, an inspector to every man in the mine. If inspectors are appointed at all, I consider they can only aid in adopting, or cause to be adopted, a system best calculated to afford safety to the lives of the miners, and the property of the coalmaster; and that system must, in its details, be suited to the particular wants of the coal mine. Inspectors may be instrumental in preventing colliery accidents, which might otherwise arise from an ill-judged economy, misapplication of the proper means, and from carelessness, or negligence, on the part of those having charge of the working department. I am inclined to think, that the presence of an inspector would operate as a salutary check on the minds of all parties connected with a coal mine, and cause them to bestir themselves, and voluntarily remove many of the evils known to exist in the present system. On the other hand, it must be admitted, that many of our colliery proprietors deserve great praise for the efforts they make, regardless of expense, to prevent colliery accidents, and for their praiseworthy exertions on those melancholy occasions, when the cries of the widow and the orphan have claimed their sympathies. As a body of the miners has petitioned Parliament for the appointment of inspectors, it is very probable some law will be passed for that purpose; and it will be the colliery owners interest to watch the introduction and passing of any such bill, and protect themselves from any undue interference by such a measure. The impression made upon my mind, by reading the newspaper accounts of the accident at Beeston, is, that not one, or any, number of Government inspectors, under the present circumstances, could have prevented it. We are told the accident was caused by the men having accidentally holed into the old goaf, or gob, of an adjoining royalty. If the viewer, or man, having charge of the workings, knew that he was approaching the goaf, or waste, of the old workings in the adjoining royalty, it was his duty to have kept boring with coal-rods, at intervals, horizontally in the coal, in the headings, or those parts of the workings most in advance in the mine. If he knew this, I say, and did not take every precaution in his power, he has been guilty of great neglect. This accident at Beeston calls loudly for the establishment of public repositories, wherein may be deposited and kept for future reference all the plans, and other necessary documents, relative to the workings, goafs, wastes, or whole coal in any royalty on our different coal-fields. If such repositories were established—say one, or more, in each coal-field in Great Britain—it would certainly be the means of showing to what extent the coal has been extracted in the different districts, and would act as a sort of chart to the miner, in pointing out to him where danger really was; and thus prevent, or be the means of preventing, the probability of holing into old workings, which are sure to be more or less charged with water, fire-damp, or other of the deleterious gases. It might be necessary to have an inspector (by which I mean only one inspector, whose duties would extend to everything requiring legislative interference) in each coal district, whose duty it would be to register the plans, sections, and other necessary documents relative to the different seams of coal in the district—to check and prove the surveys and plans of the different mine surveyors—to certify to their correctness—and to keep the drawings upon the deposited plans, as nearly as possible, up to those of the surveyor's, of which they ought to be an exact copy. To have some such system of registry for the plans, &c., of the different coal districts, is, in my opinion, as indispensable as an improved system of working and ventilating our coal mines, because we see it also is the source of many fatal and almost ruinous accidents. As this would form a kind of national record, Government would, no doubt, contribute a share of the expense in carrying out such a system; but, I think, if the colliery owners have one thing to guard against more than another, that thing is a Government inspector, paid by Government, and responsible only to Government.—W. STOREY: *Bensham, Gateshead, May* 26.

## ON THE VENTILATION AND WORKING OF COAL MINES.

SIR,—I should not have desired to occupy the valuable space of your Journal had not Mr. Darlington so strenuously supported his original proposition for the guidance of coal proprietors, by placing the working and ventilation of collieries in the hands of men brought up as working colliers, who can "merely read and write." I cannot, for a moment, suppose Mr. D. would wish to propagate an error, as, from the plain candour of his letter, he seems to possess that charity towards all men which would be a happy consummation was it more practised than talked about; yet the fact is too clear to any practical man, that Mr. D. has fallen into an error, if he means to place the superintendence of a coal mine of a fiery nature, or of any magnitude at all, under a miner with the scanty qualifications he considers requisite to enable him to discharge the trust confided in him in a faithful and effective manner. Although that practical pitman may have every desire to fulfil his duty honestly and carefully, and does so as far as his abilities enable him, yet "nothing can from nothing come." He can, perhaps, carry out the system he has been accustomed to *see*, which may be founded upon the most erroneous principles. Who could expect an uneducated man to exercise that forethought necessary in the proper laying out in systematic order for the most economical coal working of a colliery; or with that practical—yes, *practical*—skill, so as to encounter the various changes and vicissitudes attendant upon mining, and to sweep every hole and corner with a properly-directed and efficient ventilation, without having recourse to such barbarous methods as the "firing line," or thrashing it out with a "wet jacket?" No, no; we must have head-work, as well as hand-work, in our collieries. It is much to be feared that colliery proprietors pursuing this system of employing working miners as overmen, or viewers, as Mr. D. has them, unacquainted with general pitwork, and wholly incapable of managing a colliery, if any difficulty arises, even in a practical manner, is the fruitful source of many an accident, especially in the midland counties. Mr. D. can manufacture viewers much easier than we can in the north of England, where, although gentlemen, they are thoroughly, practically educated in the various departments of mining, by serving a regular apprenticeship with a well-known scientific viewer. Many of these young men, in the early part of their apprenticeship, accustom themselves to go down the pit about 3 o'clock every morning, before the pit "hangs on," or commences work, by drawing coals, and assists in setting the huge machinery below in active motion, visiting the various working places, and aiding in the ventilation of

the colliery; nor is he too much a gentleman to take hammer in hand, and fix a stopping, set a trap-door, or nail up, brattice: should any miner make the least complaint, he delights to be able to remove it.

By this practice, and being in daily contact with the pitmen, he becomes acquainted with their habits and character, and can converse with them in their own language, so as to be understood by the weakest capacity. They thus learn the practical part, and the theoretical is not neglected—so that by the time their apprenticeship is expired, they are *really practical* viewers, and are as anxious for the careful preservation of their men's health as their own. This is proved, by their exposing themselves to the same dangers. Nor are they reduced in value by the term "gentlemen" being applied to them, as every real viewer will daily and hourly visit the collieries under his charge, if not in a proper working condition, to *see* that his orders are executed, and adopt every feasible plan human effort can devise, or perseverance effect, until the colliery is in a healthy, workman-like condition. Mr. D. might as well assert, "a man must be a 'navey' before he can be a civil engineer." Let properly-educated men, possessed of talent and ingenuity, not ignorance, be employed to work our mines; then may we expect to see more work, less noise, and fewer accidents. The suggestion of "G. S., C.E.," to appoint a practical engineer to visit monthly, is not worth a second consideration—too theoretical—and would produce more injury than benefit. A viewer must visit daily, see and examine for himself, and not wholly depend upon the reports, or representations, of overmen, or others, under him—as these parties, to shield themselves from blame, may be tempted to misrepresent the state of the workings, until some fearful accident occurs, telling an awful tale. The effect is seen, but the cause is seldom found out by personal observation of disinterested parties after an accident. Here is the value of Government inspectors, as *before* an accident occurs the cause may be seen and remedied, thus preventing its occurrence. Were Government inspectors appointed, I should imagine they would not go to Lancashire for "practical viewers" to fill up such responsible situations. C. S. C.

*Durham, May* 25.

## THE WORKING AND VENTILATION OF COAL MINES.

Sir,—My letter of last week contained an error, which I will thank you to correct. In the last paragraph but one, it says, "The working collier *acquires*," &c.; it should be, "The working collier *requires*," &c. The effect of this upon the reader's perusal, I trust will be a sufficient excuse for troubling you on the subject. John Darlington.

*Alison Hall, Chorley, May* 27.

## ON THE VENTILATION OF MINES.

Sir,—Seeing many plans proposed for the better ventilation of mines, I am led to propose the following—viz.: A boiler placed over the furnace at the bottom of the upcast shaft, having two zinc pipes attached—the one to the top, and the other to the bottom of said boiler, and connected at their upper extremities. The steam would ascend in that joined to the top of the boiler, and rising as high as the junction of the two pipes would descend, until it became condensed to water in the other, and thus keep up a constant circulation for a length of time, with very little trouble to the attendant. The pit would thus receive the whole heating power of the coal expended, either in water, steam, or heated air; and, as no flame would reach the top of the boiler chimney, there would be no danger of explosion from that source.—J. Walkinshaw: *Coleford, May* 21.

## VENTILATING AND WORKING COAL MINES.

Sir,—I cannot deny myself the pleasure of noticing Mr. Darlington's spirited reply to Mr. Storey's offer. It is a true example of British energy; and such private hazards will do more to advance the improvement of mining than 10,000 public petitions. A petition is no spontaneous act; thousands sign names to the sentiments of one who draws it, and alone is answerable for the contents. Masters have no interest to destroy their colliers—much the contrary; a petition against the masters is as much beside the mark, *quite*, as to petition Government on the carlessness of men. We shall reap on either side no gain by faction. I heartily wish Mr. Storey and Mr. Darlington a successful engagement.

*Gloucester, May* 24. David Mushet, Jun.

## VENTILATION OF MINES—Mr. GIBBONS'S SYSTEM.

Sir,—Will you do me the favour of inserting in your valuable Journal the following—in order, *if possible*, to arrive at a satisfactory conclusion as to the *efficiency* of the above system of ventilation? H. Johnson.

*To Messrs. Elijah Aston, John Southan, J. Yardley, and J. Orme Brettell:*

Gentlemen,—Having read in the *Mining Journal* of Saturday, the 22d instant, the following report from you—namely, that "We have this day (May 19th) inspected Nos. 1 and 2 pits, in your Yew-Tree Colliery, and find the workings in both pits properly ventilated, and quite sufficient to carry off all hydro-carburet. The men can work perfectly safe from foul air, unless anything should arise from wanton acts of carlessness. We have also examined the place where the last accident occurred, and are satisfied it would not have happened but from his own neglect." I shall be glad if you will give me your *unequivocal* answer, in the *next Mining Journal*, stating whether or not it is *your* decided opinion that *Mr. Gibbons's* system of ventilating mines is the *best* and *only* mode suited to the South Staffordshire district, for *efficiency*, *economy*, and *safety*, in carrying out the thick coal operations; as I consider it a paramount duty incumbent on all, while such lamentable sacrifices of human life are being daily made in consequence of bad ventilation, that the most efficient, economical, and safe mode of ventilation should be carried out generally.

I am, gentlemen, your obedient servant, &c.,

*Dudley, May* 24. Henry Johnson.

## VENTILATION OF MINES—Mr. GIBBONS'S SYSTEM

Sir,—As I consider no time should be lost in this important matter, allow me, through the medium of your valuable Journal, to address the following letter to Benjamin Gibbons, Esq., as well as the one to the four gentlemen who partly reported upon the system last week.—H. Johnson.

*To Benjamin Gibbons, Esq., Shut-End House:—*

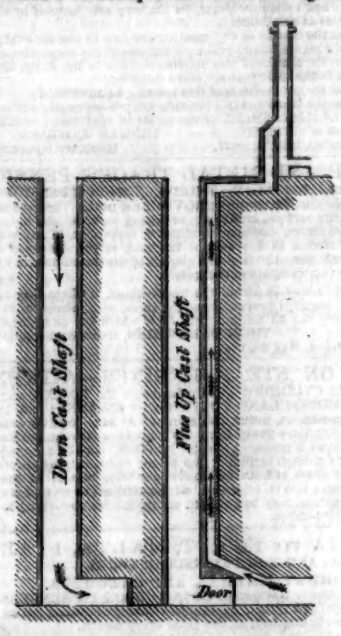
Sir,—At the present stage of lamentable occurrences daily taking place by explosion of inflammable gas in coal mines (as the late Beeston explosion on the 17th inst., by which nine lives were lost), I feel called upon to address you this letter, with the hope it may lead to a satisfactory conclusion, as to the efficiency of the system of ventilation propounded to the world, in your lately-written pamphlet—being fully convinced it was announced with the most humane and philanthropic feeling towards the amelioration of the condition of the working collier, and with a view to the more scientific prosecution of coal workings generally. That you have now had sufficient time to prove to your own wishes the efficiency of the system, I think cannot be doubted—therefore, I now beg respectfully to call upon you, in the name of the suffering collier, and those interested in coal mining generally, to convene a meeting of the coal and iron-masters of the South Staffordshire district, to be held in Dudley at your own appointed time, but the earlier the better; as, while we are writing, others are burning; and there and then take the sense of the district into consideration, and to be prepared to lay before such meeting a full description of your system—the principle on which it is based—the result obtained by your application of it on an extensive scale as regards safety—and, lastly, but not the least, the expenditure necessary on its application; being fully convinced, that not a coalowner in the district would object to listen to you, as a gentleman, as an extensively-experienced miner, and as a benevolent and valuable member of society. Having such conviction, I consider you will be withholding a great blessing from the miner, if you do not, without delay, take the short and simple course I have pointed out; as, if such meeting should terminate favourable to the system, to get it generally adopted, or, on the other hand, renounce the system as not having realised your expectations—thereby allowing other individuals to endeavour to meet the wants and wishes of the suffering collier, and render those appalling sacrifices of human life, at which every heart must shudder, few and far between. But I cannot conclude, Sir, without reminding you of your Old Pear-Tree-Lane Pits, exhausted in about 1843—a recollection, I fear, that cannot be brought to your mind without feelings of the greatest remorse, after taking a retrospective glance of your anxiety, trouble, and expenditure, for the last nine months, under your new system—a pit, in its day, as all well know, was not to be equalled in the kingdom—cleared more 10-yard coal to the acre—was effected in less time, and with fewer accidents, than any other pit in the district, or elsewhere; but, as you are well aware, was under different management, a different system of working, and a different mode of ventilation. With the hope this letter may be received with the same feeling as with which it is written, is the humble wish of, Sir, your obedient servant,

Henry Johnson.

## VENTILATION OF MINES.

Sir,—Seeing several imputations upon my lecture by several of your correspondents, I feel called upon to remark, that, if Mr. Deakin will read the paragraph again, he will find that it is 80 yards, and not 80 feet, as stated in his letter. I also stand accused by Mr. Mushet, jun., of taking Mr. Gibbons's principles as my own: I beg to assure that gentleman that his accusations are quite erroneous; for, at the time I gave the lecture, I had no idea that such a work was in existence—and most certainly had not seen it, until it was kindly lent me, a few days ago, by the editor of the *Mining Journal*. The subject I spoke of I have tried upon a small scale, and have found it to greatly increase the current through the works; but I will not urge it further, until I can more fully test its merits.

Mr. Mushet surely does not mean to say, that Mr. Gibbons is the only person that ever knew about the gas occupying that space nearest the roof, or the only person that ever spoke of top ventilation and "fighting of the shafts" for the current? or, does Mr. M. mean to say that the system of Mr. Gibbons is a perfect one? I consider it anything but perfection, the idea of 6 ft. area properly ventilating the vast space mentioned in his work—which any practical person will see, at the first view; but where two shafts are already sunk, which ventilate each other, Mr. Gibbons has not mentioned how we are to prevent the current "fighting," as it is termed, either in thick or thin coal mines; but Mr. Gibbons merely confines himself to single shafts: I consider, before he can properly overcome the fighting, and secure a permanent current, he will be obliged to adopt this method (as shown in the diagram), which will be readily understood. I certainly do not recommend it with Mr. Gibbons's 6 ft. area, but with from 9 to 12 ft. area.




As my other sketch did not receive the approbation of your correspondents, perhaps this will meet the same fate, or be again considered as Mr. Gibbons's 6 ft. area, advanced by Mr. Shepherd. By some parties, Mr. Darlington's letter seems very much applauded; I must confess that some of the remarks made by that gentleman are worthy of attention, but with other parts of the same letter I do not at all agree; but what, in the name of patience, will be the use of a *Mining Institute*, if the ground bailiffs are only required to be—not gentlemen—sober, honest, industrious, colliers, who can read and write a little?—why did not Mr. Darlington say, "at about 1*l.* per week, we can get plenty of that sort of men:" he then goes on to say, that such a person must understand trigonometry, and drawing plans—this is a most singular statement, and certainly exposes the present system of management very much. I hope this gentleman does not expect to get men trained at a mining institution at the same price he gets his sober, honest, industrious colliers—if he does, the mining students will have fine prospects.

I perfectly agree with Mr. Darlington, that the overlookers and the workmen are always at variance with each other; but why is this the case?—because the workmen know that the overlooker's judgment is no better than their own; they also know that he is no better educated than they are themselves, and, therefore, do not care for him. I have heard the workmen repeatedly say to these learned overlookers, when any dispute has arisen between them, "I understand my work better than you can tell me"—the result is, that a few gentle hints, in the shape of swearing, are exchanged. Would this be the case with a gentleman, or a properly-educated person? would he not be more respected than a common workman, taken from among them to fill that office?—most certainly he would, and all his orders would be attended to.

Mr. Darlington further exposes the present system—viz.: "nothing but education and moral training when young, &c., &c.;" but will Mr. Darlington tell me, how moral training is to be expected from the workmen, so long as the overlookers who are placed over them are ignorant of what education and moral training is? Where is the workmen to look for moral training or intelligence but from men of a superior education being placed over them? From the man that can only read and write a little, he cannot expect much; but this is only the old story over again. If you, as a body of coal and ironmasters, have at length discovered this great evil, why, with your enormous wealth and power, do you not erect schools on your works, and see that the children are properly educated?

If you, as a body of gentlemen, were to erect schools in every colliery—such schools would not cost 150*l.* per annum each—then you would be able to give the rising generation a proper moral and mining education, which would enable them to think for themselves; and such a method of education would not cost you one halfpenny per ton on your coal and iron, which most certainly would be no loss, but a great gain in a short time. It is no use to keep continually complaining of the Government, expecting it to educate the people—because, in a land of liberty, like England, the Government cannot do it. The great and influential body of iron and coal-masters have more power over their workmen than the Government has; and that ought to be brought into action by the body themselves, who would so greatly benefit thereby. The prohibiting of boys, under 10 years of age, from working in the mines, reflects great credit on the Government.

*London, May* 20. G. Shepherd, C.E.

## VENTILATION OF MINES—Mr. GEORGE SHEPHERD, C.E.

Sir,—Mr. R. Mushet is perfectly right, in supposing Mr. G. Shepherd to be a very modern "C.E." I presume, by the name, that he is a Shropshire man; and I do believe the very first Salopian that ever had the honour of "C.E." appended to his name. Some persons, in writing to me, have honoured me by placing "C.E." on the direction, in addition to my name—perhaps, the first letter or so; but they, somehow or other, found out that I was from Shropshire, and then they generally—perhaps, very wisely—discontinued the "C.E." We have had in Shropshire what have been considered *very clever* men; however, with us they used to go by the significant cognomen of "schemers." I remember, for instance, the "schemer Banks," and the "schemer Williams," and others also; but nothing like "C.E." at all in the whole county. Now, Sir, may it not be owing to the deficiency in "C.E.s" there, that the Shropshire mode of coal-getting is, to my certain knowledge, the best in the kingdom, both as to economy and ventilation?—Thomas Deakin: *Blaenavon, May* 24.

## WORKING COAL BY MACHINERY.

Sir,—We are anxiously waiting to see the result of an attempt to work coal by machinery, instead of hand labour; and I should like to be informed if any has yet been tried, with any chance of success. As it is stated in your Journal, that cutting by machinery would double the profits of a colliery, I should be most happy to see some one in this neighbourhood with one of the machines at work. I cannot see any objection to a coalowner paying the same money per ton for cutting by machinery as he does by man; and thus, if the projector can get double quantities and double profit, he will soon make his fortune. If any will venture here, they shall have plenty of room, and fair play—an open rib of coal of any length to begin upon, and an agreement for any length of time at colliers prices, and, of course, a very large profit will follow. T. Deakin.

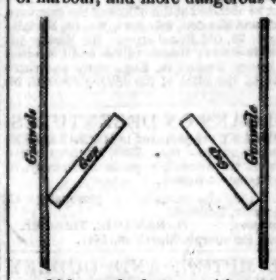
*Blaenavon, May* 20.

## BELLOWS FOR VENTILATING COLLIERIES.

Sir,—One of your correspondents speaks of men working in open spaces of worked-out coal-beds twice as large as Westminster Hall, and asks how air can be supplied to such parts underground with effect. Now, Sir, it appears to me, that injection is the mode to be adopted for such places. By boring through the strata to the coal measures, and placing such orifice in connection with vertical double bellows, with leather valves opening outwards, and others in connection with the air-tube opening into the inside, and worked by a rod, or handle, in connection with the engine, a large quantity of fresh air could always be depended on, and without interfering with the regular ventilation. Vertical bellows, with reversed valves, might also be used to work out the foul air. Supposing a bellows, 5 ft. wide, and 15 ft. long, to discharge 50 ft. per second, this would give 180,000 ft. of pure air per hour.—A. T. J. Martin: *Penzance, May* 19.

## BIRAM'S OBLIQUE PADDLE-WHEELS.

Sir,—Having seen in one of your late Journals a sketch of Mr. Biram's oblique paddle-wheels, and fully agreeing with that gentleman's judicious application of the principle he has so successfully developed, in every point of view, except that of the great extra breadth across the after extremities of the two wheels, occasioned by their oblique position, which must render them more inconvenient than those in use when going in and out of harbour, and more dangerous when passing piers or vessels, I propose, therefore, to suggest to that gentleman the forming of his vessels of iron, having spaces of due form and position, to receive the wheels within the gunwales; and this, I presume, without lessening the strength or durability, or detracting from the appearance or usefulness of the vessel. These gaps must, of course, be open below, raised as high as the upper deck, and then covered as usual by a moveable box. The subjoined sketch will explain my meaning at a glance. It may be objected that these gaps would weaken the vessel at the place of greatest strain. This would be perfectly true with respect to those constructed of timber; but the facilities of strengthening iron are so numerous, and so well understood by engineers, that they require no explanation.




*Coleford, May* 20. John Walkinshaw.

## VULCANIZED INDIA-RUBBER—SEWERAGE.

Sir,—Having attended the Society of Arts, on Wednesday evening last, and hearing an interesting paper read by Mr. Brockeden, on Vulcanized India-rubber, and the remarks of the worthy chairman on the same subject, stating that no knowledge could be at present formed as to the extent of usefulness to which that article could be applied, I consider, as one means of its extension, that it may be used as a valve, to prevent the continual escaping of unhealthy gases from our sewers, drains, &c., which may be constructed, as shown in annexed diagram. In fact, any other light body would do, as, for instance, thin sheet zinc, or very thin copper, with vulcanized hinges—such substances would require a very light power to force them open and admit the water, when they would instantly close and prevent the gases escaping. This small apparatus might be put down in all drains throughout the metropolis at a trifling expense, whereby this intolerable nuisance would be at once avoided.—G. Shepherd, C.E.: *London, May* 27.

## ATMOSPHERIC RESISTANCE ON RAILWAYS, AND IMPROVED AXLES.*

An important improvement in the construction of railway carriages has been suggested by Mr. H. Bessemer, C.E., with a view of avoiding much of the enormous loss of power occasioned by atmospheric resistance to the trains, which greatly increases at high velocities. Experiment has proved, that with a frontage of 47·8 square feet, a train suffers a greater resistance at 8½ miles per hour, than one with a frontage of 23·8 square feet at 19½ miles per hour. Mr. Bessemer's experiments are most conclusive as to the amount of resistance of the atmosphere, not only to the front of the first carriage of a train, but to the front of every one in succession. To ascertain the proportions with some exactness, an apparatus was constructed, consisting of a horizontal wheel, supported by a vertical shaft, driven by bevil gear, and connected to a steam-engine; the wheel was keyed firmly to the shaft, and carried upon it a second wheel, very lightly made of wrought iron, and free to move upon the shaft. This was placed above the first, and supported upon it by small anti-friction rollers of steel, attached to the upper one, so that the upper horizontal wheel could revolve with exceedingly little force. One of Salter's spring balances was then attached by its opposite ends to each wheel, so that the two wheels were made to move in concert, except when any opposing force was applied to the progress of the upper wheel, when the spring-balance indicated the amount of the opposing force. A model carriage of wood, of one-sixth the size of those in use upon railways, was then attached to the light iron wheel, and the apparatus put in motion. The amount of resistance opposed to the passage of the carriage through the air, was ascertained by the wheel on which it was placed moving on its friction rollers, and indicating on its spring balance the number of the pressure. By this arrangement, the following results were obtained:—At a speed of 20 miles per hour, 2·1 lbs. resistance per square foot of frontage surface; at 25 miles, 3·2 lbs.; at 30 miles, 4·5 lbs.; at 35 miles, 6·1 lbs.; at 40 miles, 7·9 lbs.; and at 45 miles, exactly 10 lbs. per square foot; this was the highest rate of speed the apparatus was capable of moving at without danger of derangement, and was made the basis of the succeeding experiments. A second carriage was then placed behind the first, with the space between the buffers open as is usual—and the resistance at 45 miles per hour was increased to 14 lbs. yer foot, or 4 lbs. for the second carriage; a third, fourth, fifth, and sixth were successively added, and it was found to increase exactly 4 lbs. with each—the whole six carriages showing a resistance of 30·5 lbs. per square foot. A small hood of wood was then fitted in the space between the first and second carriages—and, at 45 miles per hour, the resistance was immediately reduced 4 lbs., and on filling up the whole of the spaces, and the train thus representing one immense long carriage, suffered only 10 lbs. resistance per foot, the same as with the first single carriage. A carriage was then constructed with the front in the form of the bow of a ship, when the resistance was reduced to 6·3 lbs. per square foot. To carry out this important discovery in practice, Mr. Bessemer has invented a hood of leather, gutta percha, or any other flexible and durable material, similar to the hood of a chaise, the frame attached by hinges to the buffers, the upper part moving up or down on carriage head cranks, and with suitable springs, to throw back when the carriages are not in use; but when in use, the hoods to be thrown forwards, and, each being attached to the buffers, they yield to any pressure, while they would form an entire protection from atmospheric resistance to any but the first carriage. These investigations show how preposterous is the practice of placing luggage on the roofs of carriage, as every additional square foot of frontage surface gives an additional 10 lbs. resistance.

Improvements in Railway Axles.—The causes which produce the remarkable changes of quality observed in the wrought-iron of railway carriage axles, have caused much difference of opinion among scientific men; though the most generally received opinion is, that the results are due to vibration disturbing the molecular arrangement of the particles. Mr. Bessemer attributes it, however, to the continuous torsion to which railway axles are subject, from the tendency of one wheel to go faster than the opposite one, and thus giving a motion precisely similar to that which we commonly employ to break tough substances, as twisting a wire, or bending a stick backwards and forwards, until they break. To remedy the evil, he suggests a mode of forming each axle in two parts, with projecting concentric rings on the inner ends, which work in a strong coupling box. By this arrangement the same strength is given as in the ordinary axle, while provision is made for each wheel to revolve perfectly independent of the other; and thus, while both wheels would run alike on a straight line on curves, each would have perfect play to perform its own revolutions, without any twisting or disarrangement of the metal of the axle

* "On the Resistance of the Atmosphere to Railway Trains, and a means of lessening the same; together with an Account of some Improvements in Railway Carriage Axles." By H. Bessemer, C.E. London: John Weale, Architectural Library, 59, High Holborn.

Magnetic Discovery.—It is said that a physician in the south of England, has discovered the principle of magnetic force, which explains the variation and dip of the needle.

Just published, price 1s.,

**A LETTER TO THE EARL OF CLARENDON,** President of the Board of Trade, on the subject of the COPPER ORE DUTIES, being a REPLY to the LETTER of Sir CHARLES LEMON, Bart.
London: J. Ridgway—Liverpool: W. Grapel. 54

This day is published, in 1 thick vol., 4to., price £1 8s., boards,

**THE LAW RELATING TO RAILWAYS AND RAILWAY COMPANIES;** with all the Cases relating to Compensation, Mandamus, Injunction, and other Matters, decided in the Courts of Law and Equity; including the Decisions as to the Liabilities of Promoters and Provisional Committee-men, and on the Rateability of Railways to the Poor's Rate. Also, the Practice in Parliament, Standing Orders, &c. The Appendix contains all the Statutes, Forms of Notices, Warrants, Inquisitions, Awards, &c.; with Precedents of Pleadings, Deeds, &c. &c.
By WILLIAM HODGES, Esq.,
Of the Inner Temple, Barrister-at-Law, Recorder of Poole.
S. Sweet, 1, Chancery-lane. 55

**LLANYMOWDDWY MINING COMPANY, DINAS MOWDDWY, COUNTY MERIONETH.**
2400 parts, or shares, of £2 per part, or share.—To be work on the *COST-BOOK PRINCIPLE.* 56

Prospectuses, maps, and all particulars, may be obtained at the offices of the company, No. 4, Salisbury-street, Strand; Messrs. Pocock and Marston, solicitors, No. 10, Norfolk-street, Strand; James Lane, mining share agent, 75, Old Broad-street; the Mining Adventurers' Subscription Rooms, 24, Threadneedle-street; Messrs. Oliver and Co., stock and share brokers, Coggishall, Essex; and Henry Beaumont, Esq., stock and share broker, Exeter.—Prospectuses can also be had at the office of the *Mining Journal*, 26, Fleet-street, London.

**CALEDONIAN RAILWAY—LOANS ON DEBENTURES.**—The CALEDONIAN RAILWAY COMPANY are prepared to RECEIVE TENDERS of LOANS on DEBENTURES, in sums of not less than £500, for three or five years, bearing interest at the rate of 5 per cent. per annum, payable half-yearly, in Edinburgh, Glasgow, London, Liverpool, Manchester, or Bristol.

Tenders to be addressed to this office.—Parties may also communicate personally with Messrs. Foster and Braithwaite, 68, Old Broad-street, London. 57
By order of the directors, D. RANKINE, Treasurer.
Caledonian Railway Office, 122, Princes-street, Edinburgh, March 26, 1847.

**BIRMINGHAM, WOLVERHAMPTON, AND DUDLEY RAILWAY.**
SECOND CALL OF FIVE POUNDS PER SHARE—MAKING TEN POUNDS PAID.
The directors having passed a resolution, making a CALL upon the shareholders of FIVE POUNDS on each share held by them respectively—such call to be PAID on the 1st day of June, 1847; the shareholders are hereby required to pay such call on or before the day appointed, to one of the undermentioned bankers; and, in default thereof, they will be charged with interest, at the rate of 5 per cent. per annum, from that day until the said call be actually paid:—
The Birmingham Banking Company, } Birmingham.
Messrs. Attwoods, Spooner, and Co. }
OR AT THEIR LONDON AGENTS:
Messrs. Jones Loyd and Co., for the Birmingham Banking Company.
Messrs. Spooner, Attwood, and Co., for Messrs. Attwoods and Co.; and at
Messrs. Moss and Co., Liverpool, for the Birmingham Banking Company. 58
A circular will be sent to each shareholder, which must be deposited at the bankers when the call is paid. By order of the board of directors,
JOHN WILLIAM KIRSHAW, Secretary.
34, Bennett's-hill, Birmingham, April 26, 1847.

**BIRMINGHAM AND OXFORD JUNCTION RAILWAY.**—TO THE DIRECTORS OF THE BIRMINGHAM AND OXFORD JUNCTION RAILWAY COMPANY.
Whereas, at an adjourned ordinary meeting of the Birmingham and Oxford Junction Railway Company, held on the 13th day of March, 1847, it was resolved that one-third of the directors who were in office previously to the 27th day of February, 1847, should then retire from office, pursuant to the provisions of the Companies' Clauses Consolidation Act, 1845, and the Birmingham and Oxford Junction Railway Act; and that such last-mentioned directors should agree or determine amongst themselves which of them should retire; and, whereas, at an adjourned extraordinary meeting of the said company, held on the day first aforesaid, it was resolved as follows—namely: 59

"That the proprietors of this company, wholly disapproving of the proposed amalgamation of this undertaking with the Birmingham, Wolverhampton, and Dudley line, and the proposed sale of both concerns to the Great Western Railway Company, and not considering themselves legally or equitably bound by the proceedings of the meeting of the 4th of December last, held in defiance of the protest of the shareholders disqualified by the acts of the directors, the directors be and they are hereby instructed not to proceed further with, but to withdraw from, the proposed bill now before Parliament for uniting the Birmingham and Oxford Junction Railway Company, and the Birmingham, Wolverhampton, and Dudley Railway Company, into one company, and for authorising the sale of the Birmingham, Wolverhampton, and Dudley Railway, and other new works, to the Great Western Railway Company; and that the directors be further instructed forthwith to affix the company's seal to the petition now read against such bill, and to cause such petition to be forthwith presented to the House of Commons, and to oppose such bill by counsel and witnesses, and all other necessary means, in both Houses of Parliament; and that this meeting do now instruct the directors not to take, but to oppose any proceedings for or towards any amalgamation, sale, or lease with or to the Birmingham, Wolverhampton, and Dudley Railway Company, or the Great Western Railway Company, or either of them, without the further instruction of the shareholders."

And whereas John Thomas Alston, Frederick Pratt Barlow, Richard Spooner, Francis Rufford, John Branston Freer, William Matthews, Phillip Henry Muntz, Charles Russell, Charles Shaw, Henry Simonds, Charles Stevens, and the Right Hon. Edward John Hatherton, being the persons who were in office as directors of the said company previously to the 27th day of February, 1847, having refused to agree or determine among themselves which of them shall retire, and all of them continue to act as directors of the said company; and they have refused to withdraw from the said bill before Parliament, and are proceeding with and promoting the same, and are otherwise proceeding to carry into effect the proposed sale of the said Birmingham and Oxford, and Birmingham, Wolverhampton, and Dudley lines, to the Great Western Railway Company, and are otherwise acting in contravention of the said resolution: and whereas, in the minute book of the directors of the said Birmingham and Oxford Junction Railway Company, under the date of the said 13th day of March, 1847, there is entered a resolution to the purport or effect following—that is to say:

"Resolved,—That Messrs. Muntz, Mathews, Shaw, Spooner, Freer, Simonds, and Barlow, be appointed a committee, of whom three shall be a quorum, for the purpose of entering into such contract or contracts as they may deem necessary for, or in reference to, the making, maintaining, completing, and furnishing the Birmingham and Oxford Railway, and the works and conveniences connected therewith, and for the purpose of doing all such acts and things as, in their judgment, may be necessary and proper for enforcing, procuring, and obtaining the performance and execution of any such contract or contracts, or any similar contract or contracts, already entered into by, or on the part of, the company; and also for the purpose of making and enforcing the payment of calls upon the shareholders in the company, as and when and in such manner as the said committee, or any three of them, may deem proper; and also for the purpose of conducting and managing any bill or bills already or hereafter to be depending before Parliament, in any way relating to the affairs of the said company; and also for the purpose either of withdrawing any such bill or bills, or taking such steps as may be necessary or usual for procuring the passing thereof, with such clauses therein as they the said committee, or any three of them, may deem advisable; and also for the purpose of doing all such acts and things as, in their judgment, may be necessary or proper to be done by or on the part of the company, in or towards the performance and execution on their part of the resolution or agreement already made between the Birmingham and Oxford Railway Company on the one part, and the Great Western Railway Company, and Birmingham, Wolverhampton, and Dudley Railway Company respectively, or either of such companies, on the other hand; and for the purpose of enforcing and obtaining the performance of such agreements respectively, and any other agreements already made, or hereafter to be made, between the Birmingham and Oxford Railway Company on the one hand, and any other company or companies, person or persons, on the other hand, and generally for the purposes of doing all such acts in reference to the affairs of the Birmingham and Oxford Junction Railway Company as the directors thereof might lawfully do."

"Now, we the undersigned, being shareholders of the Birmingham and Oxford Junction Railway Company, holding in the aggregate more than 5000 shares—that is to say, more than one-tenth of the capital therein—do, by this writing under our hands, require you forthwith to call an extraordinary general meeting of the shareholders of the said company, for the following object or purpose—that is to say, for the purpose of considering the conduct of the said John Thomas Alston, Frederick Pratt Barlow, Richard Spooner, Francis Rufford, John Branston Freer, William Mathews, Phillip Henry Muntz, Charles Russell, Charles Shaw, Henry Simonds, Charles Stevens, and the Right Hon. Edward John Baron Hatherton, with reference to the matters aforesaid; and for the purpose of considering the propriety of instituting such suit or suits in equity in the name of the Birmingham and Oxford Junction Railway Company as counsel shall advise, for the purpose of obtaining redress or relief in the premises; and, if so thought fit, of directing that such suit or suits shall be instituted, and of retaining a solicitor for that purpose, and of considering the propriety of, and if so determined of directing such other proceedings, whether in Parliament or otherwise, as shall be considered advisable by the said meeting, for the purpose of carrying the said resolutions of the said company or the objects thereof into full effect; and for the purpose of considering the said resolutions so entered in the minute book of the said directors, and any proceeding which may have been had in pursuance thereof, and of dealing therewith as the said meeting shall appear advisable; and for the purpose of giving such directions touching the common seal, books, papers, and writings of the said Birmingham and Oxford Junction Railway Company, and the use and custody thereof, as the said meeting shall deem advisable.

Dated this 29th day of April, 1847.

| | |
|---|---|
| Elias Jos. Morley, | Harman Grisewood, |
| Samuel Beale. | James Berkley, |
| Richard Heath, | A. A. Hoghton, |
| Richard Peyton, | Joseph Laurence, |
| J. Mathews, | Jas. Gadesden, |
| Jno. C. Birkinshaw, | Isaac Braithwaite, |
| Geo. Turner, | Wm. Anning, |
| Edward Tootal, | Jno. Sanderson, |
| W. Jno. Beale, | M. A. Rothschild, |
| Joseph Sanders, | Geo. Towgood, |
| Thomas Heath, | G. F. Bult, |
| W. J. Atkinson, | Jas. F. Bult, |
| Henry Tootal, | Alfred Clark, |
| James Wheeler, | Joseph Locke. |
| Jno. Edw. Phillips, | |

The requisition above set forth having been presented to the directors of the Birmingham and Oxford Junction Railway,

Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the shareholders of the said company will be HELD at Dee's Royal Hotel, Birmingham, on Saturday, the 12th day of June, at Two o'clock in the afternoon.

Proxy papers, in order to be available, must bear a stamp of 3s. 6d., and must be returned by the secretary 48 hours, at least, before the time appointed for the meeting.
P. H. MUNTZ, Chairman,
JOHN WM. KIRSHAW, Secretary.
34, Bennett's-hill, Birmingham, May 18, 1847.

**IRON, HARDWARE, AND METAL TRADES' PENSION SOCIETY.**—At a General Meeting of the society, held at the London Tavern, the 24th of May, 1847,
ROBERT WILLIAM KENNARD, Esq., Sheriff of London and Middlesex, Vice-President, in the chair,
It was resolved unanimously,—That the following gentlemen be elected Vice-Presidents of the society:— Sir JOSIAH JOHN GUEST, Bart., M.P.
WILLIAM TAYLOR COPELAND, Esq., Ald., M.P.
THOMAS WILLIAM KENNARD, Esq.
SAMUEL ELLIS, Esq.
WILLIAM GOULD, Esq.
RICHARD POWELL DAVIS, Esq. 60
Resolved unanimously, on the motion of John Dale, Esq., V.P., seconded by Mr. Valentine Hurst,
That, in recognition of the services of Henry Lowman Taylor, Esq., as the founder of this society, one of the pensions hereafter to be granted shall be placed at his absolute disposal for life, under the title of "The Founder's Gift," to be conferred by him on any candidate previously declared eligible by the committee.
The meeting then proceeded to the ballot for the election of Three additional Pensioners, when the following votes were recorded:—

| | |
|---|---|
| Alice Osborn | 870 votes. |
| Hannah Fryer | 673 " |
| Joseph Wills | 624 " |
| John Mason | 233 " |

upon which the chairman declared Alice Osborn and Hannah Fryer to be elected to pensions of Fourteen Guineas each per annum, and Joseph Wills to a pension of Twenty Guineas per annum.
Resolved unanimously,—That the thanks of this meeting be presented to Messrs. Geo. Baker, jun., Thomas Constable, and Valentine Hurst, for the very able manner in which they have discharged their duties as scrutineers.
Resolved unanimously,—That the thanks of this meeting are due to the honorary secretary, Mr. Thomas Hawkins, for his zealous and valuable services on the present occasion.
Resolved unanimously,—That the thanks of this meeting are due to Mr. Ridge for the important aid rendered by him to the society as honorary collector.
Resolved unanimously,—That the proceedings of this meeting be advertised.
Resolved unanimously,—That the thanks of this meeting are pre-eminently due to Mr. Sheriff Kennard, for his kind and able fulfilment of the duties of chairman; as also for his unwearied exertions on behalf of the society.
THOMAS HAWKINS,
67, Upper Thames-street, London, May 26, 1847. Honorary Secretary.

**IRON, HARDWARE, AND METAL TRADES' PENSION SOCIETY.**—Notice is hereby given, that the THIRD ELECTION of PENSIONERS of the above society will take place in the month of NOVEMBER next. The candidates must be deserving and necessitous persons, occupying, or having occupied, the station of master, traveller, clerk, warehouseman, shopman, foreman, or apprentice, in any branch of the iron, hardware, or metal trades, in any part of England, or the widows of such persons. No person can be candidates until declared eligible by the committee, to whom they must be recommended by two members of the society. 61
The printed forms of application may be had of the undersigned, to whom they are to be returned, filled up with the required particulars of the cases, with references to two respectable persons, on or before the 2d August next, after which day no applications can be received. THOMAS HAWKINS, Honorary Secretary.
67, Upper Thames-street, London, May 26, 1847.

**IMPROVEMENT ON STEAM-ENGINES.—AITKEN'S** PATENT ATMOSPHERIC CYLINDER greatly increases the POWER and improves the WORKING of MARINE and LAND CONDENSING ENGINES; and, by his Patent Pump, adapted to steam-engines, water may be raised 30 feet—used for condensing and returned—without taking more power from the engine than is required for the friction of the pump. The Patentee is prepared to enter into CONTRACTS for applying the necessary APPARATUS, at a charge, including the patent right, varying according to the size and situation of the engines, of from £30 to £50 per horse-power, on the increased power given to the engine; this is, of course, all the expense, as no fuel is used.
Drawings, and further information, may be obtained on application (by letter) to Mr. Aitken, 15, Newman-street, Oxford-street. 62

**STEAM TO INDIA VIA EGYPT, MALTA, ITALY,** ALEXANDRIA, AND THE PENINSULAR PORTS.
PASSAGE TO BOMBAY, MADRAS, AND CALCUTTA.
The Peninsular and Oriental Steam Navigation Company BOOK PASSENGERS for CEYLON, MADRAS, and CALCUTTA direct, by steamers leaving Southampton on the 20th, and for Alexandria, *en route* to Bombay, on the 1st of every month. 63
A steamer from Southampton leaves the 1st and 20th of every month for Malta, whence are steamers to Naples, Genoa, Civeta Vecchia, three times a month.
STEAM TO CORUNNA, OPORTO, VIGO, LISBON, CADIZ, AND GIBRALTAR.
A steamer leaves Southampton on the 7th, 17th, and 27th of every month.
Apply at the Peninsular and Oriental Steam Navigation Company's offices, 51, St. Mary Axe, London, where only passages can be secured throughout.

**STEAM COAL—WITHOUT SMOKE,** as per experiments made at her Majesty's Dockyard, Woolwich.
CAMERON'S COALBROOK STEAM COAL, AND SWANSEA AND LOUGHOR RAILWAY COMPANY.—(Completely Registered and Incorporated.) 64
*OFFICES—2, MOORGATE-STREET, LONDON.*
The directors are now prepared to supply steam ship companies, manufacturers, shippers, and others, with the company's steam coal, either at the company's wharf at Swansea, or in London. A statement, showing by comparative trial the superiority of this coal for steam purposes over every other, and a scale of prices, may be had on application at the company's offices here, or at their wharf at Swansea.—March 18, 1846.

**GAS.—The NATIONAL ECONOMIC GAS BURNER** is universally admitted to be the GREATEST IMPROVEMENT of the day. For "Brilliancy, Purity, and Economy of Light," it stands unrivalled.—*See* following extracts from testimonials:—
DR. URE.—"Preferable to any other I have hitherto seen, both in operation and economy."
ISHAM BAGGS, Esq.—"For brilliancy and purity of flame, I have never seen it surpassed."
SEPTIMUS PIESSE, Esq., Analytical Chemist.—"Tested against the 15-hole Argand, it proves a saving of 20 per cent., and against the fish-tail of 40 per cent."
*Mining Journal.*—"A most brilliant light, perfectly white to the lowest point of ignition—a sure test of perfect combustion." 65
*Morning Herald.*—"An extremely pure and intense light."
*Mechanics' Magazine.*—"The superior brilliancy of effect, intensity, and power of this burner, we can unreservedly vouch for."
*Patent Journal.*—"It possesses advantages over other burners: perfect combustion—consequently, total absence of smoke."
*Magazine of Science.*—"We are bound honestly and justly to affirm, that it is nearer perfection than any we have ever seen."
*Birmingham Advertiser.*—"Superior to any we ever witnessed."
*Exeter Flying Post.*—"A saving of from 30 to 40 per cent."
May be seen burning, and can be tested by an experimental meter, at the office of PAUL & CO., gas engineers, 12, Leather-lane, Holborn.—A detailed description and diagram, with testimonials at length, forwarded, post-free, on application.

**THE PATENT SAFETY FUSE,** FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."
Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Tuckborne, Cornwall. 66

**BRUNTON'S PATENT ORE-DRESSING FRAME.**—These FRAMES, for DRESSING TIN, COPPER, and OTHER MINERALS, having been in use, and given satisfaction, on several mines, during the last two years, the PATENTEE begs to call the attention of all Adventurers and Mine Agents to the great advantages, both as regards economy of labour and the great increase of mineral obtained by their adoption. The following gentlemen can certify as to their utility:—Thos. Bolitho and Sons; P. N. Johnson, Esq.; Capt. Jos. Vivian, Cook's Kitchen Mine; Capt. R. Kernick, St. Ives Consols; Capt. R. Edwards, Wheal Franco; Capt. W. Teague, Wheal Grey; Capt. James Miners, and Capt. Matthew Rogers, Carn Brea Mines. 67

**SMITH AND ENGLISH (LATE ANDREW SMITH),** PRINCES-STREET, LEICESTER-SQUARE, LONDON,
*ENGINEERS, MACHINISTS, IRON AND BRASS FOUNDERS, &c.,*
PATENTEES and MANUFACTURERS of Improved Steam-engines, Rapid Steam Generators, Railway Wheels, Rails and Chairs, Propellers for Canal and River Navigation
*ROPE-MAKING, FLAX-DRESSING, AND OTHER MACHINERY,*
Raising and Lowering Machines, Wharf, Warehouse, and Truck Cranes, Tramway, Traversing and Stationary Purchase Crabs, Tackle, &c.—Also, Steam-engines and Boilers, of various constructions; Bone, Sugar, and Mill Work, and Machinery of every description manufactured and repaired; Saw-mills, Breweries, and Factories attended.
Planing, Boring, Turning, Screw-cutting, &c. 68

**TO ENGINEERS, RAILWAY CONTRACTORS, MINING AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE** for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public. 69
References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

**PATENT IMPROVEMENTS IN CHRONOMETERS,** WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. 70
DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

**LEMONNIER, HAIR-WORKER to the Queen,** and Member of the Academie de l'Industrie, and who obtained a Silver and Platina Medal at the Exhibition, has just INVENTED several NEW DESIGNS, as Palm Trees, Wreaths, Knots, and Cyphers, which he executes with hair in its natural state, without using gum or other cement. A variety of Trees executed by a mechanical process. 71
*No. 15, RUE DU COQ SAINT HONORE, PARIS.*

TO RAILWAY AND ELECTRIC TELEGRAPH COMPANIES.
BY HER MAJESTY'S ROYAL LETTERS PATENT.

**REID'S PATENT PREPARED WIRE FOR ELECTRIC TELEGRAPHS, WIRE ROPE, AND FENCING.**
The ADVANTAGES attending this WIRE are—
1. That it may be had of any length.—2. That it is of uniform size, and, when annealed, is of one uniform degree of softness.—3. That it is prepared for being galvanised by a process which leaves it wholly uninjured.
Hitherto it has been the practice, in cleaning wire to prepare it for the galvanising process, to immerse it in sulphuric, or nitric, acid, by means of which the wire has been much injured in its structure, from the acid not acting equally on all parts alike. By the new process this evil is entirely obviated, and the zinc coating is found to be more perfect.
For further particulars apply to the patentee, at 25, University-street, London, where specimens may be seen, and all orders will receive immediate attention.
CONTRACTS entered into and executed with promptitude. 72

TO MINE AND COLLIERY PROPRIETORS, SLATE QUARRY OWNERS, RAILWAY CONTRACTORS, IRONMONGERS, DEALERS IN GUNPOWDER, AND OTHERS.

**MESSRS. JOHN HALL & SON,** the PATENTEES AND SOLE MANUFACTURERS OF
SCHÖNBEIN'S PATENT GUN-COTTON,
Respectfully state, that they are now prepared to SUPPLY the PATENT GUN-COTTON (compressed for the convenience of carriage), in round and square paper cases, of 4 ozs. each, packed in boxes, containing 50 and 100 cases each, at the price of 3s. per lb., for ready money.
Also, in tubes or cartridges of... 1, 1½, 1¾, and 1¾-inch diameter;
Containing..... 2, 4, 6, and 8 ounces each, at the
Additional charge of ..... 1, 1½, 2, and 2½ pence, each tube or cartridge. 73
For blasting in slate quarries, paper tubes will be supplied, 3 ft. in length, containing 1 oz. of the Patent Gun-Cotton per foot.
4 OUNCES OF GUN-COTTON } equal in power to { 24 OUNCES OF BLASTING GUNPOWDER,
As proved in mortars, similar to those used by the Board of Ordnance, for the proof of gunpowder.
*OFFICE—23, LOMBARD-STREET, LONDON.*

**ELECTRO GALVANISM—PUBLIC NOTICE.—WHEREAS,** amongst a variety of important improvements in the application of electricity to TELEGRAPHS, and other useful purposes, for which we have obtained her Majesty's Royal Letters Patent, is a certain HYDRAULIC BATTERY, so constructed as to maintain a perpetual ingress of pure exciting liquid, while that which has become vitiated is subject to immediate egression—and, whereas, his Honour the Vice-Chancellor of England has granted an injunction restraining the ELECTRIC TELEGRAPH COMPANY and CHARLES MASSI from the use of a battery formed on a similar principle, in violation of our Patent right duly established— 74
THIS IS TO GIVE NOTICE, that all parties whomsoever, whether private individuals or public bodies, who shall make or use, FOR ANY PURPOSE WHATSOEVER, a battery, or other apparatus, regulated on the like principle, without our express license and consent, will be immediately proceeded against for such infringement. We avail ourselves of this opportunity of disclaiming all connexion with any printing telegraph.
140, Holborn Bars, May 24, 1847. BRETT & LITTLE.

**IMPORTANT TO ENGINEERS, MANUFACTURERS, RAILWAY AND STEAM-BOAT COMPANIES.**
Messrs. W. & C. MATHER beg to call the attention of the ABOVE PARTIES to their IMPROVED PATENT ELASTIC METALLIC PISTONS.
The PRINCIPAL FEATURE and ADVANTAGE of THIS IMPROVEMENT is— 75
1. Its great ELASTICITY and SELF-ADJUSTING PROPERTIES, which enable it to yield to any inaccuracy of the cylinder, whether oval or taper, and to move with the least possible friction.
2. Its extreme SIMPLICITY and LIGHTNESS, consisting of only two pieces of metal, having the vertical and lateral pressure in due and proper proportion, independent of each other.
3. It takes the LEAST possible SPACE, and is well adapted for air and water-pumps, as it allows of a larger water way.
Messrs. W. & C. MATHER feel confident that it is the BEST ELASTIC METALLIC PACKING yet known, for the above reasons.
Models may be seen at the Salford Iron-Works, Manchester; at W. Barker's, engineer, Newton-Moor; and also at J. Mather's, engineer, Beaufort-street, Chelsea, London.

**IMPORTANT TO RAILWAY AND STEAM NAVIGATION COMPANIES, MANUFACTURERS, AND ENGINEERS.**
W. BROTHERTON AND CO.'S
PATENT LUBRICATING FLUID (or Animal Oil) FOR ALL DESCRIPTIONS OF MACHINERY. 76
W. B. & CO. have the pleasure to state, that the above article is extensively used in her Majesty's Steam Navy, and by several of the principal Steam Navigation and Railway Companies, and is pronounced by them, and by the first practical engineers of the day, to be far better adapted for the purposes of lubrication than any other article hitherto used for such purposes. The Patent Lubricating Fluid is equally applicable for the most intricate and fine pieces of machinery, as for the heaviest bearings of the steam-engine. It is cheaper, much more economical, and cleaner than oils at present in use; is free from smell, and calculated to effect a vast saving in the expenditure of working steam powers.
Further particulars can be had, and testimonials seen, by application to the manufacturers, W. BROTHERTON & CO., Hungerford Wharf, Strand, London.
N.B.—The above article will burn in lamps, and give a light equal to the best sperm oil!

**TO ENGINEERS, BOILER-MAKERS, AND OTHERS.—LAP-WELDED IRON TUBES, FOR STEAM-BOILERS.**
W. H. RICHARDSON, JUN., & CO., DARLASTON, *STAFFORDSHIRE,* 77
MANUFACTURE all DESCRIPTIONS of WELDED WROUGHT-IRON TUBES, for STEAM, GAS, &c., of any required length and diameter, on the new and unequalled principle of Mr. J. Rosso's recent invention (patented August, 1846).—Address as above.

**FLEXIBLE HOSE-PIPES FOR LOCOMOTIVE ENGINES,** RAILWAY CRANES, FIRE-ENGINES, GAS, &c.
PATENT VULCANISED INDIA-RUBBER HOSE-PIPES AND TUBING OF EVERY DESCRIPTION. 78
These pipes are made to stand hot-water without injury—are very superior to leather pipes, or the common India-rubber pipes; and, as they do not become hard or stiff in the lowest temperatures, or require any application when out of use, are particularly well adapted for fire-engines.
FLEXIBLE TUBING, of every description, for gas, chemical purposes, &c.
VULCANISED INDIA-RUBBER WASHERS, all sizes, for steam and hot-water joints, &c.—Sole manufacturer, JAMES LYNE HANCOCK,
Goswell Mews, Goswell-road, London.

**PATENT GUTTA PERCHA DRIVING BANDS.**—The GUTTA PERCHA COMPANY beg to acknowledge the extensive patronage they have already received for their PATENT BANDS, and inform their numerous friends, that having completed the erection of their new machinery, they are now prepared to execute orders without delay. THE PATENT GUTTA PERCHA BANDS are now well known to possess superior advantages—viz., great durability and strength, permanent contractility, and uniformity of substance and thickness, by which all the irregularity of motion occasioned by piecing in leather straps is avoided. 79
They are not affected by fixed oils, grease, acids, alkalies, or water. The mode of joining them is extremely simple and firm. They grip their work in a remarkable manner, and can be had of any width, length, or thickness, without piecings. All orders forwarded to the company's works, Wharf-road, City-road, will receive immediate attention.—London, May 17. W. GRANVILLE, Manager.

PROJECTED RAILWAYS.

**PATENT METALLIC SAND, OR ENGLISH POZZOLANO.**
GREAT REDUCTION IN PRICE.
Extensively used in mortar and concrete at the great tunnels on the London and Birmingham Railway, in the foundations of the new Houses of Parliament, sea walls on the South Devon Railway, Clifton Reservoirs, and other works of importance.
From its chemical qualities, the metallic sand forms, in admixture with lime and common sand, a cement, mortar, or concrete, of flinty hardness, and almost entire incompressibility; and, from its adhesive and impervious qualities, it completely and for ever excludes water. The more it is exposed to the atmosphere, and to wet and damp, the harder and more durable it becomes. 80
As an external stucco, the metallic sand cement is unaffected by frost or wet; in appearance it resembles the best Portland stone—requires, therefore, neither colour nor paint, and is entirely free from vegetative cracks and blisters, to which Roman cement is liable.—Further information will be given, and specimens shown, on application to
Mr. C. K. DYER, 4, New Broad-street, London.

ANALYSIS OF THE PATENT METALLIC SAND.

| | | | |
|---|---|---|---|
| Silica | 49 | Lime | 6 |
| Oxide of iron | 32 | Magnesia | 2 |
| Alumina | 8 | Zinc | 3 |

NO BREWING UTENSILS REQUIRED.
**PATENT CONCENTRATED MALT AND HOP EXTRACT** enables PRIVATE INDIVIDUALS to MAKE
FINE HOME-BREWED ALE, 81
WITHOUT EMPLOYING ANY BREWING UTENSILS.—It has only to be dissolved in hot-water and fermented.—Sold, in jars, for medicinal and other purposes, at 1s. and 1s. 6d.; and in bottles for brewing 9 to 18 gallons and upwards of ale, at 6s. 6d. and 12s. 6d. each, by the
BRITISH NATIONAL MALT EXTRACT COMPANY,
7, NICHOLAS-LANE, LOMBARD-STREET; Petty, Wood, and Co., 53, Threadneedle-street; Wix and Sons, 22, Leadenhall-street; Batty and Co., 15, Finsbury-pavement; De Castro and Peach, 65, Piccadilly; Hockin and Co., 36, Duke-street, Manchester-square; and oilmen and grocers generally.
Also, just published, and may be had gratis,
**NATIONAL BREWING: A GUIDE to the USE of CONCENTRATED MALT AND HOP EXTRACT,** for BREWING and WINE MAKING; to which is added, MEDICAL OPINIONS relative to the virtues of malt and hope.

London:—Printed and Published, weekly, by HENRY ENGLISH, at the Office, No. 26, FLEET-STREET, in the city of London, where all Communications and Advertisements are requested to be forwarded—addressed to "the Editor"—post-paid. *May 29, 1847.*

*** It will at all times save much delay and inconvenience, if communications are directed simply To THE EDITOR,
*Mining Journal Office,*
26, FLEET-STREET, LONDON.
And POST-OFFICE ORDERS, &c., must be made payable to WILLIAM SALMON MANNERS, as acting for the proprietors.